

IN THE SUPERIOR COURT OF THE STATE OF ARIZONA
 FOR THE COUNTY OF YAVAPAI

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SANDRA K MARKHAM, CLERK

BY: *Jaqueline Marshman*

STATE OF ARIZONA,)
)
 Plaintiff,)
)
 vs.)
)
 JAMES ARTHUR RAY,)
)
 Defendant.)
)

Case No. V1300CR201080049

REPORTER'S TRANSCRIPT OF PROCEEDINGS
 BEFORE THE HONORABLE WARREN R. DARROW
 TRIAL DAY FORTY-TWO
 MAY 6, 2011
 Camp Verde, Arizona

ORIGINAL

REPORTED BY
 MINA G. HUNT
 AZ CR NO. 50619
 CA CSR NO. 8335

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2 FOR THE COUNTY OF YAVAPAI

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4 STATE OF ARIZONA,)
5 Plaintiff,)
6 vs.) Case No. V1300CR201080049
7 JAMES ARTHUR RAY,)
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1 INDEX

2	3	4	5	6	7	8	9	10	11	12
		EXAMINATIONS	PAGE							
		WITNESS								
		ARCHIAUS LICINIUS MOSLEY, JR.								
		Cross continued by Ms. Do	5							
		Voir dire by Mr. Hughes	46							
		Cross continued by Ms. Do	47							
		Redirect by Mr. Hughes	130							
		Recross by Ms. Do	216							
		Further redirect by Mr. Hughes	221							
		Further recross by Ms. Do	221							
		Further redirect by Mr. Hughes	223							
		Further recross by Ms. Do	224							
		Further redirect by Mr. Hughes	225							
		Further recross by Ms. Do	229							
		Further redirect by Mr. Hughes	231							
		Further recross by Ms. Do	232							

13 EXHIBITS ADMITTED

14	15	16	17	18	19	20	21	22	23	24	25
		Number	Page								
		998	61								
		1001	70								

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1 Proceedings had before the Honorable
2 WARREN R. DARROW, Judge, taken on Friday, May 6,
3 2011, at Yavapai County Superior Court, Division
4 Pro Tem B, 2840 North Commonwealth Drive,
5 Camp Verde, Arizona, before Mina G. Hunt, Certified
6 Reporter within and for the State of Arizona.
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PROCEEDINGS

THE COURT: The record will show the presence of the defendant, Mr. Ray; the attorneys, the jury. Dr. Mosley has returned to the witness stand.

Ms. Do.

MS. DO: Thank you, Your Honor.

CROSS-EXAMINATION (Continued)

BY MR. DO:

Q. Good morning, Dr. Mosley.

A. Good morning, Ms. Do.

Q. Yesterday before we broke for the day, we were talking about the progression of your thought processes and your opinions; correct?

A. Correct.

Q. And this morning I rewrote that time line so we could all have it on one page. You reached your final conclusion on February 2, 2010; correct?

A. I did reach a final conclusion on February 2, 2010.

Q. And that final conclusion was one in which you rendered an opinion that based upon the circumstantial evidence, Liz Neuman died of multisystem organ failure due to hyperthermia due to exposure of a sweat lodge; correct?

A. I'm not sure you've quoted me exactly

there, Ms. Do. Let me just read to you what I wrote.

Q. Sure.

A. Multisystem organ failure due to hyperthermia due to prolonged sweat lodge exposure.

Q. That was your conclusion on February 2, 2010; correct?

A. Yes.

Q. And it was a conclusion that you reached after four months of conducting the autopsy; correct?

A. I'm sorry, Ms. Do. The autopsy did not take me four months to complete.

Q. I didn't say that, Dr. Mosley. I'm sorry. Let me repeat it in case you misheard.

What I said was, you concluded your report on February 2, 2010, which is some four months after you completed your autopsy; correct?

A. Correct.

Q. Now, on February 2, 2010, when you reached that opinion, you told this jury yesterday that it was -- and I know you used this No. 4 -- 99.8752 percent was based upon the circumstances; correct?

A. I'm embarrassed that I used that number

because it's ridiculous that that is what I said.

Q. Okay. And I'm not going to harp on this. You told the jury yesterday that you sort of pulled that number out of -- you said it was facetious; correct?

A. I did.

Q. But the underlying message is not facetious. And that is that a substantial part of your conclusion was based upon the reported circumstances; correct?

A. Correct.

Q. All right. Now, since February 2, 2010, you had received some additional questions from the state within recent months that then prompted you to reevaluate your thought processes; correct?

A. Correct.

Q. And in reevaluating that, you took another look at Ms. Neuman's medical records?

A. Correct.

Q. And based on your review of Ms. Neuman's medical records, you have reached some doubts about your conclusions; correct?

A. Correct.

Q. And what you saw in Ms. Neuman's medical records, you reached a conclusion that, based upon

your review of her records, there are signs and symptoms inconsistent with heat stroke and hyperthermia; correct?

A. That's correct.

Q. There are signs and symptoms in her medical records that are consistent with toxicity, including organophosphate toxicity; correct?

A. Correct.

Q. What we call a "cholinergic toxidrome"; correct?

A. Correct.

Q. Based upon those signs and symptoms, you've reached an opinion today, as you sit here, that you cannot exclude organophosphates as a contributing cause or a cause of death; correct?

A. That's correct.

Q. Where we left off yesterday was on April 18 and 19 you and I had a telephone conversation with Mr. Hughes present; correct?

A. Correct.

Q. And that telephone conversation was recorded?

A. Okay.

Q. Do you know that?

A. Yes, I do.

1 Q. Have you received a transcript of those
2 two interviews?

3 A. I have received transcripts of those
4 interviews.

5 Q. I forwarded you those; correct?

6 A. You did.

7 Q. On April 18 and 19 you informed
8 Mr. Hughes and me of your new or your revised
9 opinions; correct?

10 A. I'm sorry. Can you repeat that question.

11 Q. Sure. It was on April 18, 2011, just a
12 few weeks ago, that you told Mr. Hughes and myself
13 about these opinions regarding the signs and
14 symptoms being inconsistent with heat stroke and
15 hyperthermia, being consistent with
16 organophosphates, and that you cannot exclude
17 organophosphates; correct?

18 A. Correct.

19 Q. And then you confirmed those opinions
20 again on April 19, 2011; correct?

21 A. Correct.

22 Q. On April 19, 2011, you then told me that,
23 based upon your evaluation or your reevaluation of
24 all the evidence in Ms. Neuman's medical records,
25 you reached an opinion that Dr. Ian Paul could be

1 right; correct?

2 A. Correct.

3 Q. Now, I understand yesterday that --
4 perhaps I understood you were beginning to say that
5 you believe today that Dr. Paul is not correct?

6 A. Correct.

7 Q. And I'm going to talk to you about that.
8 So on April 18 and April 19, 2011, you had this
9 opinion that the defense expert, Dr. Ian Paul,
10 could be right; correct?

11 A. Correct.

12 Q. Now, Dr. Paul wrote a report that you
13 received; correct?

14 A. Correct.

15 Q. And in that report Dr. Paul indicated
16 that he examined the medical records of Liz Neuman;
17 correct?

18 A. Correct.

19 Q. That he examined the medical records of
20 Kirby Brown?

21 A. Correct.

22 Q. And James Shore?

23 A. Correct.

24 Q. And of all the other participants who
25 went to the hospital that night?

1 A. Correct.

2 Q. So he evaluated the state's evidence;
3 correct?

4 A. Correct.

5 Q. It wasn't as if the defense produced some
6 new evidence the state didn't already have;
7 correct?

8 A. Correct.

9 Q. And this is evidence that you also had?

10 A. Correct.

11 Q. Based upon his evaluation, he reached an
12 opinion that the signs and symptoms he saw were
13 inconsistent with heat stroke; correct?

14 A. Correct.

15 Q. Based upon the signs and symptoms he saw,
16 he believed they were consistent -- well, let me
17 ask you this question: At some point you were
18 informed by Detective Diskin that there was a state
19 interview of Dr. Paul; correct?

20 A. Correct.

21 Q. And after that interview, Detective
22 Diskin called you to tell you that Dr. Paul had
23 discussed an organophosphate toxicity as a possible
24 cause of death; correct?

25 A. Correct.

1 Q. And that was the first time you heard of
2 that; correct?

3 A. Correct.

4 Q. And that is what prompted this whole
5 process some 17 months after you concluded your
6 autopsy, some 15 months after you concluded your
7 report; correct?

8 A. Correct.

9 Q. Now, yesterday, May 5th, after the lunch
10 hour, Mr. Hughes and I then spoke to you for a
11 brief moment in one of the rooms down at the end of
12 the hall?

13 A. Yes.

14 Q. Unfortunately, it was sort of a
15 spontaneous conversation so no one was able to
16 record it; correct?

17 A. Correct.

18 Q. And in that conversation, I asked you in
19 the presence of Mr. Hughes if you had changed your
20 opinions that you provided to me and Mr. Hughes on
21 April 18 and April 19.

22 Do you remember that?

23 A. I do.

24 Q. And your response to my question was?

25 A. I'm sorry. The question was?

1 Q. It's okay. Do you recall me asking you
2 yesterday -- I believe it was around 1:30 p.m. --
3 Dr. Mosley, the opinions you provided to me and
4 Mr. Hughes on April 18 and April 19 -- have you
5 changed those opinions?

6 Do you remember that?

7 A. **Have I changed the opinions?**

8 Q. Let me get an answer first. Did I ask
9 you that question yesterday?

10 A. **I think so.**

11 Q. And your response to that question was
12 no; correct?

13 A. **Yes. I believe that is correct. I**
14 **haven't changed -- what I told you is correct. I**
15 **still believe that Dr. Paul, theoretically, could**
16 **be correct.**

17 Q. About this not being a case of heat
18 stroke but rather a case of poisoning; correct?

19 A. **Heat stroke. I think that both are**
20 **substantial factors in this case. There is a toxic**
21 **mechanism and a hyperthermia mechanism. I think**
22 **both mechanisms are in play here.**

23 Q. Okay. And I appreciate that. I'm going
24 to spend some time with you on that.

25 What you are telling this jury today is

1 that, based upon your reevaluation of the evidence,
2 you do believe that toxicity was in play; correct?

3 A. **Correct.**

4 Q. The toxicity that could be in play based
5 upon the signs and symptoms is organophosphates;
6 correct?

7 A. **That is among the toxicities that are**
8 **possible.**

9 Q. There are others?

10 A. **There are others.**

11 Q. Okay. Now, I'm going to discuss this a
12 little bit more with you. But I just want to make
13 sure that I have your testimony clear as to the
14 time line.

15 A. **Sure.**

16 Q. As of today you are not saying -- let me
17 rephrase that. When you told us on April 18 and 19
18 that Dr. Paul could be right, you are confirming
19 that statement again today; correct?

20 A. **Correct.**

21 Q. Now, when the state provided you with
22 Dr. Paul's report, did they give you any
23 information about who Dr. Paul was?

24 A. **Yes.**

25 Q. Did they tell you that Dr. Paul is a

1 medical examiner for the State of New Mexico?

2 A. **Yes.**

3 Q. Did they tell you that Dr. Paul works in
4 a capacity such as yours where he is a medical
5 examiner for the State of New Mexico?

6 A. **Yes.**

7 Q. Meaning, he works with law enforcement,
8 prosecutors?

9 A. **Yes.**

10 Q. Meaning that he is not somebody who is
11 out there for private hire by criminal defendants;
12 correct?

13 MR. HUGHES: Objection. Misstates the
14 evidence.

15 THE COURT: Sustained.

16 MS. DO: Well, I have a follow-up to that.
17 I'm sorry, Your Honor.

18 Q. What I'm trying to clarify with you,
19 Doctor, is you do understand that Dr. Paul is
20 somebody who works for a state and primarily works
21 with law enforcement and prosecutors; correct?

22 A. **I'm aware of that. Yes.**

23 Q. Did the state also tell you that Dr. Paul
24 has never testified on behalf of a defendant
25 charged in a criminal matter?

1 A. **I did not know that.**

2 Q. Did the state also tell you that Dr. Paul
3 is board certified in both emergency medicine and
4 forensic pathology?

5 A. **They did.**

6 Q. Meaning, he has that extra wealth of
7 information and experience that we talked about
8 yesterday in treating live patients?

9 A. **Yes.**

10 Q. That extra wealth of experience in
11 treating live patients who come in with heat
12 illnesses; correct?

13 A. **Correct.**

14 Q. And poisoning; correct?

15 A. **Yes.**

16 Q. And so based upon the information that
17 the state provided you regarding Dr. Paul's
18 credentials, you have no reason to believe that he
19 is not qualified; correct?

20 A. **None whatsoever. I mean, Mr. Paul's**
21 **credentials are impeccable. I suppose a thorough**
22 **background check to find holes in Mr. Paul's**
23 **credentials might reveal that he's allergic to**
24 **kryptonite and he can't see through lead.**

25 **So I'm aware of that. I was aware of**

1 that when I reviewed his report. I was aware of
2 that before, as I went into rereview of
3 Ms. Neuman's records, that if I were to oppose
4 Dr. Paul, in my opinion, that it would be,
5 essentially, similar to opposing the voice of God.
6 And so it's not a light -- it's not a thing I take
7 lightly when I have an opinion that is divergent
8 from Dr. Paul's.

9 Q. Okay. I appreciate the humor, Doctor.
10 No one is saying that he's Superman, and no one is
11 saying he's God. But what you are telling the
12 jurors is that his credentials are impeccable, that
13 he is qualified; correct?

14 A. Correct.

15 Q. And that if you were to reach an opinion
16 that disagreed with his, it might be intellectually
17 contradictory; correct? Meaning, he as an
18 intellectual -- a medical basis for his opinion;
19 correct?

20 A. Yes. We're all obliged to be
21 intellectually honest. Dr. Paul is. I am. That's
22 what I bring to court, and that's what Dr. Paul
23 will bring to court.

24 Q. Thank you. And, Dr. Mosley, I'm not at
25 all challenging your intellectually -- intellectual

1 honesty. And you were candid with us on April 18
2 and 19. But people can make mistakes; correct?

3 A. Yes, we can.

4 Q. As you told this jury, and I think we all
5 appreciate your candor yesterday, you said that --
6 and I believe your exact words -- I don't want to
7 misquote you -- was something to the effect that
8 you were always open to new opinions and new
9 information; and if you're wrong, you're going to
10 revise your opinion; correct?

11 A. Correct.

12 Q. And that's somewhat what you've done
13 here; correct?

14 A. Yes.

15 Q. And we all appreciate that. So I'm not
16 challenging your intellectual honesty, because
17 you've been candid.

18 Now, let me ask you this next question:
19 You've told the jury now that it is your opinion
20 today that there were signs and symptoms in Liz
21 Neuman's medical records that were inconsistent
22 with heat stroke and hyperthermia and consistent
23 with an organophosphate toxicity. Those two signs
24 and symptoms -- well, let me ask you. How many
25 signs and symptoms are we talking about?

1 A. I'm sorry. We're talking about
2 hyperthermia, heat stroke?

3 Q. Let me clarify. When you reached the
4 opinion that there were signs and symptoms
5 inconsistent with heat stroke but consistent with
6 organophosphates toxicity, what signs and symptoms
7 are we talking about?

8 A. So what we're talking about is a case in
9 which hyperthermia is the sole player. If the only
10 thing going on is exposure to a high temperature
11 and nothing else as the lethal act, what's
12 inconsistent about that are miosis, the pinpoint
13 pupils, and the -- and if that foamy sputum is
14 excessive salivation, then that would be also
15 inconsistent with the early findings of heat
16 stroke, of pure heat stroke.

17 Q. Okay. So let's talk about these two
18 things. You did see documented in Ms. Neuman's
19 medical records evidence that she had miosis,
20 meaning pinpoint pupils?

21 A. Yes. Yes.

22 Q. And your information regarding the frothy
23 sputum or the foaming, as you told this jury, that
24 fact is not documented in the medical records --
25 correct? -- based on your review?

1 A. I'm not sure where I got that impression.
2 I'm not sure.

3 Q. That's okay. What I'm asking, Doctor, is
4 do you recall seeing this documented in Liz
5 Neuman's medical records?

6 A. Yes.

7 Q. You do recall?

8 A. I believe so.

9 Q. That's okay. If you need to review
10 anything to be sure, please do.

11 A. Okay. I don't think I have those facts.

12 Q. If the jury were to have heard testimony
13 from witnesses on that stand that participants
14 after the sweat lodge ceremony did show signs of
15 what they've called "foaming" or "frothy sputum" --

16 A. Yes.

17 Q. -- I want you to accept that just as a
18 hypothetical. All right?

19 A. Okay.

20 Q. So these two signs and symptoms -- the
21 frothy sputum, the foaming; plus the miosis, the
22 pinpoint pupils -- are the two things you know are
23 inconsistent with heat stroke; correct?

24 A. At least in the early phases as someone
25 might present at the scene upon emerging from the

1 **sweat lodge.**

2 **Q.** What you mean by that is you would not
3 expect in the case of heat stroke that participants
4 would come out of the sweat lodge ceremony and
5 immediately show signs of frothy sputum or foaming;
6 correct?

7 **A. Correct.**

8 **Q.** You used a phrase yesterday called
9 "pulmonary edema." Do you remember that?

10 **A. I did.**

11 **Q.** That's, basically, fluid in the lungs;
12 correct?

13 **A. Fluid in the air spaces that should**
14 **normally contain air. Instead they contain fluid.**

15 **Q.** And sometimes that, then, comes out as
16 frothy sputum or foaming; correct?

17 **A. Yes. It's common for me to see frothy**
18 **sputum in deceased persons. And more often than**
19 **not, it's a sign of pulmonary edema.**

20 **Q.** Okay. But that's different than what
21 we're talking about now in the sense you're talking
22 to the jury about what happens to the participants
23 as they immediately emerge from that sweat lodge.

24 If witnesses have testified to this jury
25 that they saw participants come out of the sweat

22

1 lodge ceremony with frothy sputum or foaming, that
2 would be an immediate sign that you would not see
3 in the case of heat stroke; correct?

4 **MR. HUGHES:** Objection, Your Honor. That
5 hypothetical misstates the evidence.

6 **THE COURT:** Dr. Mosley, if you can answer
7 that, you may.

8 **THE WITNESS:** Can you run it by me again,
9 please.

10 **Q.** BY MS. DO: Sure. And, of course, you
11 weren't here when the other witnesses testified.
12 I'm asking you to accept in this hypothetical that
13 the jury has heard these facts. And it's up to the
14 jury to determine whether or not that's true.
15 Okay?

16 **A. Okay.**

17 **Q.** What I'm asking you is this: If
18 witnesses have testified to this jury that they had
19 seen participants immediately after the sweat lodge
20 ceremony showing frothy sputum or foaming, that is
21 a sign that you would not expect to immediately see
22 in the case of heat stroke; correct?

23 **A. The answer to that question depends on**
24 **the severity of the heat stroke.**

25 **Q.** Okay.

1 **A. If they are unconscious and they're**
2 **unable to protect their airway, it's entirely**
3 **possible that upon being dragged out of the sweat**
4 **lodge, pulmonary edema would be found. Because**
5 **it's not so much a result of the heat, but the**
6 **collapse and going unconscious. But I think it's**
7 **an unusual finding in most cases of heat stroke to**
8 **see frothy sputum.**

9 **Q.** You would not normally see it; correct?

10 **A. Correct.**

11 **Q.** Now, I had also talked to you about your
12 opinions with regards to frothy sputum on April 18,
13 2011, in that conversation; correct?

14 **A. Yes.**

15 **Q.** We also talked about miosis?

16 **A. Yes.**

17 **Q.** Okay. Now, let me try and let me get it
18 to where you can explain to the jury. In the case
19 of heat stroke, if it's severe and it's at the
20 end -- sort of what you call the "late stage";
21 correct?

22 **A. Yes.**

23 **Q.** You're saying that you wouldn't be
24 surprised to see frothy sputum or foaming; is that
25 correct?

24

1 **A. Correct.**

2 **Q.** And that would be dependent on whether or
3 not the person, for example, was unconscious. Is
4 that what you're saying?

5 **A. Yes.**

6 **Q.** So in the case -- if a participant comes
7 out of the sweat lodge ceremony, does show some
8 signs of altered mental status but is not
9 unconscious, and frothy sputum is coming out of the
10 person's mouth, that would be a sign you would not
11 expect in heat stroke; correct?

12 **A. Correct.**

13 **Q.** And since this is what we call a
14 "mass-casualty incident," Doctor, you would expect,
15 would you not, that the same cause or causes
16 affecting one participant as to another might be
17 the same?

18 **A. Yes.**

19 **Q.** You wouldn't expect there to be different
20 causes in effect in one mass-casualty incident;
21 correct?

22 **A. Correct.**

23 **Q.** Now, the miosis and the frothy sputum --
24 and let me just clarify what you told Mr. Hughes
25 yesterday when he asked you questions about how

1 much you would expect. You indicated to him that
 2 it's quite possible that you could see the quantity
 3 that he described as being the foam on a latte;
 4 correct?
 5 **A. Yes.**
 6 **Q.** Now, I want you to take those two signs
 7 and symptoms and put them together rather than
 8 looking at them separately. You have got miosis,
 9 pinpoint pupils, and you've got frothy sputum and
 10 foaming. Those two in conjunction are inconsistent
 11 with heat stroke; correct?
 12 **A. Yes.**
 13 **Q.** Those two in conjunction are inconsistent
 14 with hyperthermia; correct?
 15 **A. Yes.**
 16 **Q.** Those two in conjunction are consistent
 17 with organophosphate toxicity; correct?
 18 **A. They are.**
 19 **Q.** We also talked yesterday -- Mr. Hughes
 20 asked you something about a differential diagnosis?
 21 **A. Yes.**
 22 **Q.** And you explained it to the jury. And I
 23 just want to make sure that I understood your
 24 explanation. Sometimes a patient can come in and
 25 exhibit a pattern of signs and symptoms that could

1 point in the direction of two causes; correct?
 2 **A. Yes.**
 3 **Q.** So there are some illnesses where the
 4 signs and symptoms are very similar; correct?
 5 **A. Correct.**
 6 **Q.** And because they're similar, you have to
 7 include in your diagnosis all of the possibilities;
 8 correct?
 9 **A. Correct.**
 10 **Q.** With heat stroke and hyperthermia, the
 11 signs and symptoms -- the typical signs and
 12 symptoms of heat stroke and hyperthermia are very
 13 similar to what you would expect to see in
 14 organophosphate toxicity; correct?
 15 **A. Correct.**
 16 **Q.** They almost, like, mirror each other;
 17 correct?
 18 **A. "Mirror." I'm sorry. Can we choose a**
 19 **different word?**
 20 **Q.** Very similar. You're welcome -- fine.
 21 Very similar, meaning you could see nausea in both
 22 cases; correct?
 23 **A. Yes.**
 24 **Q.** You could see fatigue in both cases?
 25 **A. Yes.**

1 **Q.** Malaise, which is just a general sort of
 2 not feeling well; correct?
 3 **A. Yes.**
 4 **Q.** Emesis, what you described to the jury
 5 yesterday, being vomiting; correct?
 6 **A. Yes.**
 7 **Q.** And altered mental status; correct?
 8 **A. Yes.**
 9 **Q.** From as minor as confusion to severe as
 10 coma; correct?
 11 **A. Correct.**
 12 **Q.** And in very severe cases, death; correct?
 13 **A. Correct.**
 14 **Q.** Now, those are the similarities. But
 15 what is very different between those two
 16 illnesses -- heat stroke, hyperthermia, and
 17 organophosphate toxicity -- are those two signs and
 18 symptoms in conjunction; correct?
 19 **A. I'm sorry.**
 20 **Q.** You want me to repeat that?
 21 **A. Please.**
 22 **Q.** You just explained to the jury what are
 23 very similar between heat illnesses, heat stroke
 24 and hyperthermia, and organophosphate toxicity;
 25 correct?

1 **A. Yes.**
 2 **Q.** And because of the similarity between the
 3 signs and symptoms of those two disorders, it's a
 4 challenge for clinicians to sort them out; correct?
 5 **A. Yes.**
 6 **Q.** And sometimes you mistakenly think one
 7 points this way when it really is the other cause;
 8 correct?
 9 **A. Yes.**
 10 **Q.** But what is very different, what
 11 separates those two disorders, are those two signs
 12 and symptoms, pinpoint pupils and frothy sputum or
 13 foaming; correct?
 14 **A. Yes.**
 15 **Q.** So, Doctor, when you reviewed the medical
 16 records for Liz Neuman, you did see evidence of
 17 pinpoint pupils; correct?
 18 **A. Correct.**
 19 **Q.** You did see evidence that the emergency
 20 room doctors, the ICU doctors, were puzzling over
 21 this odd presentation of signs and symptoms;
 22 correct?
 23 **A. Correct.**
 24 **Q.** What they were thinking of in their
 25 diagnoses was a toxicity; correct?

1 **A. Correct.**

2 **Q.** I'm going to hand you these four volumes
3 of medical records. They're in evidence as
4 exhibits 365, 366, 367 and 368. Those are the
5 complete medical records for Liz Neuman; correct?

6 **A. I'm sorry. Let me just restate the facts**
7 **of the moment. You handed me four binders and**
8 **asked me if these are the complete medical records**
9 **of Liz Neuman. I've never seen these binders**
10 **before. I can't tell you if page 5,063 is missing**
11 **or not. So with any certainty, tell the jury that**
12 **I know that this record is complete, I cannot do**
13 **that.**

14 **Q.** Okay. And I appreciate that
15 clarification. You did receive the complete
16 records for Ms. Neuman at some point from the
17 state; correct?

18 **A. Correct.**

19 **Q.** These have been introduced into evidence
20 with the state's agreement. So I'll represent to
21 you that we understand them to be the complete
22 records. Okay?

23 **A. Okay. I'd like to add that I really like**
24 **this binding. It's much better than the way I got**
25 **it.**

1 **Q.** We can make you a copy, Doctor.
2 You did get a chance to review
3 Ms. Neuman's records; correct?

4 **A. Yes.**

5 **Q.** What I'd like to do with you and just go
6 through what you saw when you reviewed or
7 rereviewed her medical records.

8 **A. Well, the miosis and the doctors thinking**
9 **that this is an atypical presentation of heat**
10 **stroke. And those were the main things that stuck**
11 **in my mind. And also what Dr. Paul pointed out**
12 **that she was hypertensive, which that really**
13 **doesn't fit either.**

14 **Q.** Hypertensive is -- would you explain.

15 **A. High blood pressure.**

16 **Q.** Because you would normally see low to
17 normal blood pressure in heat stroke; correct?

18 **A. Yes.**

19 **Q.** And that was yet another inconsistent
20 finding for heat stroke; correct?

21 **A. Inconsistent with heat stroke?**

22 **Q.** Yes.

23 **A. Yes.**

24 **Q.** All right. Let's just go through the
25 record so that the jury knows what you looked at.

1 Okay? This is Exhibit 365, page --

2 **A. What's the Bates stamp?**

3 **Q.** Let me get it for you, Doctor. It's
4 Bates stamp 2597.

5 **A. Okay.**

6 **Q.** And I direct your attention to what I'm
7 blowing up on the screen here. At the top of this
8 page, you do see Verde Valley Fire District;
9 correct?

10 **A. Yes.**

11 **Q.** And you see Liz Neuman's name?

12 **A. Yes.**

13 **Q.** This is a typical run sheet for EMS
14 responding to a scene; correct?

15 **A. Correct.**

16 **Q.** Below where I have it highlighted on the
17 board, or the projector, there is documentation of
18 her vital signs; correct?

19 **A. Correct.**

20 **Q.** You can see the first time that is
21 documented on this EMS run sheet is a time of 5:45;
22 correct?

23 **A. Yes.**

24 **Q.** And that's the earliest time we see on
25 this particular document; correct?

1 **A. Yes.**

2 **Q.** That would indicate at 5:45, EMS was at
3 Liz Neuman taking her vitals; correct?

4 **A. Correct.**

5 **Q.** Then we see in this column right here
6 that the EMS noted her pupils to be two
7 millimeters, nonreactive, at either 5:50 or 5:55;
8 correct?

9 **A. Yes.**

10 **Q.** And two millimeters, you would agree, is
11 pinpoint?

12 **A. Yes. That's technically miosis or**
13 **pinpoint pupils.**

14 **Q.** Dr. Mosley, if you could please step down
15 to the easel. This is my very rough drawing of an
16 eye. If you could take a pen, I'm going to draw in
17 the iris. Could you show us using this drawing
18 here what a pinpoint pupil would like look like?

19 **A. Sure. Can I flip the page? I don't**
20 **really like your drawing.**

21 **Q.** Sure.

22 **A. This is the iris. The white part is the**
23 **sclera, and this is a two millimeter pupil that is**
24 **equivalent to miosis. A normal pupil might be much**
25 **larger than that, five or six millimeters perhaps.**

1 Q. Could you draw so the jury understands
2 what a dilated pupil is where the pupils are
3 enlarged.

4 A. **A dilated pupil, it might fill the**
5 **whole -- just leave a small part of the colored**
6 **part of your eye left. It might be 10 or 9**
7 **millimeters wide.**

8 MR. HUGHES: Your Honor, pursuant to Rule 106,
9 I'd ask if Ms. Do would show the rest of the page
10 that's up on the screen, including the blood
11 pressures that are to the right.

12 THE COURT: If there is not a pending
13 question, also, Ms. Do, if you could remove the
14 exhibit and completely --

15 And obviously on redirect, Mr. Hughes,
16 you can display whatever is relevant.

17 Q. BY MS. DO: Thank you, Doctor.

18 So we saw that the Verde Valley Fire
19 Department EMS personnel noted two millimeter
20 pupils at about 5:50 or 5:55; correct?

21 A. **Correct.**

22 Q. And are you aware that 9-1-1 call -- the
23 first 9-1-1 call was made at 5:21 p.m.?

24 A. **I was not.**

25 Q. Now, if you will take a look at page --

1 I'm sorry. Exhibit 369.

2 A. **Are you referring to --**

3 Q. A different volume now. There are
4 Post-it notes to tell you which.

5 If you will turn to Bates stamp 2593,
6 which should be the first page or the second page.

7 A. **Bates stamp 2593?**

8 Q. Yes. We're now looking at Bates stamp
9 2593 at the top. You see the Guardian Air record;
10 correct?

11 A. **Yes.**

12 Q. This would be different than the Verde
13 Valley Fire Department. Do you know?

14 A. **Yes. This is a different air ambulance**
15 **company.**

16 Q. Okay. So a second EMS personnel noted
17 Ms. Neuman to have in both her left and her right
18 constricted pupils; correct?

19 A. **Yes.**

20 Q. And "constricted" is another way to say
21 pinpoint; correct?

22 A. **Yes.**

23 Q. Now, once Ms. Neuman was taken to
24 Flagstaff Medical Center, you did see in her
25 medical records that the pinpoint pupils persisted;

1 correct?

2 A. **Yes.**

3 Q. And if you will take a look at
4 Exhibit 366 at Bates stamp 3027.

5 A. **3027?**

6 Q. Yes. Taking a look at the top, you do
7 see the Flagstaff Medical Center record; correct?

8 A. **Yes.**

9 Q. This is a report by Dr. Peterson, Mark
10 Peterson; correct?

11 A. **Yes.**

12 Q. With the result date of October 8, 2009;
13 correct?

14 A. **October 8. Yes.**

15 Q. And that's the date of her admission?

16 A. **Correct.**

17 Q. And Dr. Peterson, do you know whether or
18 not he is the ER doctor who treated Ms. Neuman upon
19 her admission?

20 A. **I'm not sure.**

21 Q. Dr. Peterson noted that her eyes were
22 open, pupils pinpoint; correct?

23 A. **Yes, he did.**

24 Q. And then we talked about Dr. Cutshall.
25 You noted him to be the intensive care specialist,

1 the doctor who treated her in the ICU unit;
2 correct?

3 A. **Correct.**

4 Q. In Dr. Cutshall's critical care
5 evaluation at Bates stamp 3014 --

6 A. **Okay.**

7 Q. -- October 8, 2009, at 10:25 p.m.;
8 correct?

9 A. **Yes.**

10 Q. Dr. Cutshall, again, noted on
11 presentation, Ms. Neuman had pinpoint pupils?

12 A. **That's correct.**

13 Q. In addition to Ms. Neuman's medicals,
14 Dr. Mosley, I understand the state had recently
15 provided you with additional medical records of the
16 other participants. Correct?

17 A. **Yes.**

18 Q. That was just on March 24, 2011?

19 A. **Yes.**

20 Q. And in the conversation that you and I
21 had with Mr. Hughes on April 18 and April 19, I
22 asked you at that point if you had a chance to
23 review the medical records of the other
24 participants.

25 Do you remember that?

1 **A. I do.**

2 **Q.** And I understand you have other cases.
3 You told me at that time that you did not -- you
4 had not had the time to review those records?

5 **A. That's correct.**

6 **Q.** And do you recall me asking you
7 specifically if you wouldn't mind taking the time
8 to review the records of the other three critically
9 ill who were admitted to Flagstaff: -- Tess Wong,
10 Stephen Ray and Sidney Spencer?

11 **A. Yes. I do recall you asking me to do**
12 **that.**

13 **Q.** Since that phone call, have you had a
14 chance to review the records of Sidney Spencer,
15 Tess Wong and Stephen Ray?

16 **A. No. Not completely.**

17 **Q.** What part of it have you reviewed?

18 **A. I'm not sure. Sidney Ray. I do believe**
19 **I read something about his clinical findings.**

20 **Q.** You mean "Stephen Ray"?

21 **A. Yes.**

22 **Q.** Okay. I'm going to hand you Exhibit 222
23 that has been admitted into evidence. And I will
24 represent to you that this was provided to us as
25 the complete records for Sidney Spencer.

38

1 **A. Okay.**

2 **Q.** If you could flip through that and tell
3 me if you recognize the documents to indicate
4 whether you've actually reviewed Ms. Spencer's
5 records.

6 **A. It looks like so many other documents**
7 **I've seen, I can't tell you whether I've reviewed**
8 **this or not. But I'm willing to review it now.**

9 **Q.** Why don't we look through it together
10 with some direction here.

11 This is Sidney Spencer's record; correct?

12 **A. Yes.**

13 **Q.** If you will take a look at Bates stamp
14 2084.

15 **A. Okay.**

16 **Q.** At the top of that you do see that the
17 doctors at Flagstaff Medical Center noted that
18 Ms. Spencer had two millimeter pupils; correct?

19 **A. Correct.**

20 **Q.** Pinpoint?

21 **A. Correct.**

22 **Q.** And indicating minimally reactive?

23 **A. Yes.**

24 **MR. HUGHES:** Your Honor, pursuant to Rule 106,
25 I'd ask the entire portion of the bottom be

1 highlighted and magnified so the jury can see it.

2 **MS. DO:** Your Honor, I think that can be done
3 on redirect.

4 **THE COURT:** In this case, that exhibit can be
5 examined again on redirect.

6 **MS. DO:** Thank you.

7 **Q.** Based upon that presentation of the
8 pinpoint pupils, do you note at the bottom the
9 Flagstaff Medical Center doctor indicating that
10 based upon the relatively miotic pupils,
11 considerations also regarding the possibility of a
12 cholinergic overdose?

13 **A. Yes. I see that.**

14 **Q.** And cholinergic overdose includes exactly
15 what we've been talking about, organophosphate
16 toxicity; correct?

17 **A. Yes, ma'am. That's correct.**

18 **Q.** We also talked about the medical records
19 of a Tess Wong. I'm going to hand you what's been
20 admitted as Exhibit 396. And I'll represent to you
21 that was provided to us as the complete medical
22 records for Tess Wong.

23 **A. Okay.**

24 **Q.** You're not certain if you've reviewed
25 these records; correct?

40

1 **A. I'm not.**

2 **Q.** If I could have you take a look at Bates
3 stamp 2156, I believe. Yes, 2156. You will see on
4 Ms. Wong's medical records, the doctors also noted
5 she had pinpoint pupils at two millimeters on
6 presentation; correct?

7 **A. Correct.**

8 **Q.** As you sit here today, do you have any
9 information whether or not Tess Wong and Sidney
10 Spencer were admitted as critically ill on the date
11 of October 8?

12 **A. I believe they were.**

13 **Q.** All right. Now, you mentioned a Stephen
14 Ray. You possibly could have reviewed his records;
15 correct?

16 **A. Yes.**

17 **Q.** And, again, these records were just
18 provided to you on March 24, 2011?

19 **A. I did get some other records early on,**
20 **but I'm not sure if his were among them.**

21 **Q.** Let me show you Exhibit 213. That's been
22 admitted into evidence. I'll represent to you that
23 was provided as the complete medical records of
24 Stephen Ray, also admitted to Flagstaff Medical
25 Center.

1 **A. Thank you. Yes.**
 2 **Q.** And if we could take a look at Bates
 3 stamp 7093. On that page the doctor at Flagstaff
 4 Medical Center also saw Mr. Ray, now the fourth
 5 person, at Flagstaff Medical Center, with pinpoint
 6 pupils; correct?
 7 **A. I'm sorry. It's not highlighted.**
 8 **Q.** Do you see it?
 9 **A. Give me a moment.**
 10 **Q.** My question is, do you see the
 11 documentation of pinpoint pupils for Mr. Ray?
 12 **A. There it is.**
 13 **Q.** You do see that; correct?
 14 **A. I do.**
 15 **Q.** At the top, the doctor had written down
 16 anticholinergic toxidrome; correct?
 17 **A. Yes, he did.**
 18 **Q.** Anticholinergic would include dilated
 19 pupils, the one you drew on the right; correct?
 20 **A. Yes.**
 21 **Q.** And so based upon pinpoint pupils, it's
 22 your opinion that it would be a cholinergic
 23 toxidrome; correct?
 24 **A. Correct.**
 25 **Q.** Which would include organophosphate

1 toxicity?
 2 **A. Correct.**
 3 **Q.** Now, taking all of these records that
 4 we've just reviewed, Dr. Mosley, of the four
 5 admitted into the ICU of Flagstaff Medical Center,
 6 adding to that, if the jury has heard testimony
 7 that these four people showed signs of frothy
 8 sputum or foaming at the scene, your opinion would
 9 be that that is much more suggestive of
 10 organophosphate toxicity; correct?
 11 **A. Much more suggestive of organophosphate**
 12 **toxicity than it is suggestive of heat stroke?**
 13 **Q.** Yes.
 14 **A. Yes.**
 15 **Q.** In fact, it's inconsistent with heat
 16 stroke?
 17 **A. Yes.**
 18 **Q.** Now, you, based upon these records,
 19 Doctor, today would include in your differential
 20 diagnosis organophosphate toxicity; correct?
 21 **A. Correct.**
 22 **Q.** Now, if you will go back to the time line
 23 with me -- going back to the time line, the revised
 24 opinion that you hold today, that you cannot
 25 exclude organophosphate toxicity, that there are

1 signs and symptoms inconsistent with heat stroke,
 2 that you have doubts about whether or not it's just
 3 heat that's in play, that's --
 4 **A. Those are all true statements.**
 5 **Q.** That's all -- those are revised opinions
 6 based upon your review of these medical records;
 7 correct?
 8 **A. Correct.**
 9 **Q.** Now, Liz Neuman's records. We looked at
 10 two reports, one by Dr. Peterson and one by
 11 Dr. Cutshall; correct?
 12 **A. Yes.**
 13 **Q.** And those are the reports that indicated
 14 the pinpoint pupils; correct?
 15 **A. Correct.**
 16 **Q.** And indicated that the doctors were
 17 discussing on the night of October 8, 2009, the
 18 possibility of a toxicity; correct?
 19 **A. Yes.**
 20 **MS. DO:** May I have one moment, Your Honor?
 21 **THE COURT:** Yes.
 22 **Q.** BY **MS. DO:** Doctor, I'm going to show you
 23 an exhibit that we've marked as Exhibit 580. And
 24 at the bottom, you can see Bates stamp; correct?
 25 **A. Yes, ma'am.**

1 **Q.** And do you know, based upon your
 2 involvement in the case, the Bates stamp comes from
 3 the state?
 4 **A. I believe.**
 5 **Q.** Looking at 580, there is a certification
 6 on the front page; correct?
 7 **A. Yes.**
 8 **Q.** By a Pam Edgerton, employed with the
 9 Yavapai County Sheriff's Office?
 10 **A. Yes.**
 11 **Q.** The date at the bottom indicates the
 12 request is made on October 9, 2009?
 13 **A. Yes.**
 14 **Q.** And if you flip to the second page, do
 15 you note those to be or recognize those to be the
 16 medical records for Liz Neuman, which may or may
 17 not be duplicative of what we've been looking
 18 through?
 19 **A. Yes.**
 20 **Q.** Okay. Now, you had indicated a while
 21 back, when we interviewed you in May 2010, that you
 22 had received some of Ms. Neuman's records.
 23 Do you remember that?
 24 **A. I do.**
 25 **Q.** The records you have for Ms. Neuman at

1 the time you did your autopsy and the time that you
2 conducted -- I'm sorry -- the time you conducted
3 the autopsy and the time you wrote the report on
4 February 2, 2010, was not as voluminous as the four
5 volumes that has the binding that you like;
6 correct?

7 **A. Correct.**

8 **Q.** Now, looking at Exhibit 580, does that
9 appear to be more consistent with the volume that
10 you were provided or you had at the time you issued
11 your report?

12 **A. It does.**

13 **Q.** Now, looking at Exhibit 580, I'm going to
14 first turn to Bates stamp 1864. If you could
15 confirm for the jury that that is the same
16 emergency department report from Dr. Peterson that
17 we just looked at on the screen showing pinpoint
18 pupils.

19 **A. Well, this one is typed -- it's been**
20 **transcribed. But I believe he most likely dictated**
21 **this typewritten report based on the notes he took**
22 **while -- that we saw earlier.**

23 MS. DO: Your Honor, since these are the
24 records that the doctor had prior to issuing the
25 report, I ask they be admitted into evidence.

1 MR. HUGHES: I don't think the foundation has
2 been laid, Your Honor. May I take him on voir
3 dire?

4 THE COURT: Yes, you may.

5 VOIR DIRE EXAMINATION

6 BY MR. HUGHES:

7 **Q.** Doctor, the record that you reviewed when
8 you prepared your autopsy report -- did you obtain
9 those directly from Flagstaff Medical Center?

10 **A. I did.**

11 **Q.** Did you obtain them from -- I think you
12 said the cover sheet there shows Detective Pam
13 Edgerton?

14 **A. You're right. It does.**

15 **Q.** Did you obtain the records when you
16 prepared your report from Detective Pam Edgerton?

17 **A. I don't know. I mean, I might have --**
18 **well, I probably did obtain them from both.**

19 **Q.** Do you know whether the records you have
20 in front of you are the ones, then, that are the
21 only records that you had available when you
22 prepared your autopsy report?

23 **A. I cannot say with certainty that these**
24 **are the only records I had in front of me when I**
25 **prepared my autopsy report.**

1 MR. HUGHES: Your Honor, I would object on
2 foundation.

3 THE COURT: Sustained at this time. We're
4 going to take this up at the recess.

5 CROSS-EXAMINATION (Continued)

6 BY MS. DO:

7 **Q.** Doctor, you did have medical records for
8 Ms. Neuman at the time you conducted your autopsy;
9 correct?

10 **A. Yes.**

11 **Q.** You had reports and documents from
12 Ms. Neuman's medical stay at the time that you
13 wrote your report on February 2, 2010; correct?

14 **A. Correct.**

15 **Q.** And you do recall seeing at that time the
16 records by Dr. Cutshall and the records of
17 Dr. Peterson at the emergency room and ICU;
18 correct?

19 **A. Yes.**

20 **Q.** What I'm asking you is in Exhibit 580,
21 which were obtained on October 9, will you confirm
22 for the jury that Bates stamp 1860 through 1866 are
23 those two reports that you reviewed at the time of
24 autopsy and had at the time you issued your report?

25 **A. I'm not sure if I had them at the time of**

1 **autopsy. I certainly had it by the time I issued**
2 **my report.**

3 **Q.** Okay. Now, you had told us yesterday
4 that what you saw in reviewing Ms. Neuman's records
5 that were provided to you -- the four volumes that
6 we see, the larger volumes on March 24 -- you do
7 recall seeing what the doctors call the -- odd
8 presentation; correct?

9 **A. Correct.**

10 **Q.** And you saw that at the time you wrote
11 your report on February 2, 2010; correct?

12 **A. Correct.**

13 **Q.** Now, if we could take a look at your
14 autopsy notes, which have been admitted as
15 Exhibit 363, these were notes that you took
16 contemporaneously, meaning at the same time that
17 you conducted the autopsy; correct?

18 **A. Correct.**

19 **Q.** And these notes indicate that you were
20 writing down the signs and symptoms or the facts of
21 Ms. Neuman's presentation to Flagstaff Medical
22 Center; correct?

23 **A. Correct.**

24 **Q.** Which would indicate that you had
25 reviewed at the time of the autopsy some of her

1 medical records; correct?

2 **A. Yes.**

3 **Q.** And since Dr. Peterson was the emergency
4 room treating doctor and Dr. Cutshall was the ICU
5 treating doctor, you would have seen their records;
6 correct?

7 **A. Correct.**

8 **Q.** And nowhere on this Exhibit 363, which
9 contains your contemporaneous notes, in reviewing
10 the medical records did you notate the pinpoint
11 pupils; correct?

12 **A. Correct.**

13 **Q.** And nowhere in those notes at the time of
14 autopsy in reviewing the medical records did you
15 indicate the toxicity that the doctors were talking
16 about; correct?

17 **A. Correct.**

18 **Q.** So would it be fair to say -- and I
19 believe you testified to this yesterday -- that
20 when you reviewed the medical records, you just
21 didn't give any significance to these signs and
22 symptoms?

23 **A. I did not know what to make of those**
24 **signs and symptoms.**

25 **Q.** At that time?

1 **A. At that time. Yes.**

2 **Q.** But now knowing what you do know or being
3 asked these questions and having Dr. Paul's
4 analysis, you would agree with me that your revised
5 opinion is based upon the same information that you
6 had at the time of autopsy; correct?

7 **A. Yes.**

8 **Q.** You just didn't make any significance of
9 it?

10 **A. Correct.**

11 **Q.** So what I want to make sure we
12 understand, Dr. Mosley, is that your opinion today,
13 that we've gone over already, is based upon the
14 same evidence, the same medical documents, that you
15 had at the time you conducted the autopsy; correct?

16 **A. Correct.**

17 **Q.** At the time that you reviewed these
18 medical records and noted but didn't give
19 significance to the pinpoint pupils or the
20 discussion of a toxidrome, did you think about
21 calling the ER doctors to ask, what should I make
22 of this?

23 **A. I did not.**

24 **Q.** That would include neither Dr. Peterson
25 or Cutshall; correct?

1 **A. Correct. I've never spoken to either of**
2 **them.**

3 **Q.** I understand that hindsight is 20/20, or,
4 as Mr. Li, says 20/20 is hindsight. You, looking
5 back, now would include based upon the same
6 evidence you had over 17 or 15 months ago in your
7 diagnosis organophosphate toxicity; correct?

8 **A. In the differential diagnosis -- I'm**
9 **sorry. I just want to be clear about the question**
10 **I'm answering. Can you just repeat it one more**
11 **time.**

12 **Q.** Certainly. Because your opinion today,
13 your revised opinion, is based on the same evidence
14 you had at the time of autopsy, if you know what
15 you know now then, you would have included in your
16 differential diagnosis organophosphate toxicity;
17 correct?

18 **A. I would have considered it earlier as a**
19 **possibility.**

20 **Q.** And that's what we mean when we say
21 differential diagnosis. And you're not suggesting
22 to the jury that it's a final diagnosis; correct?

23 **A. Correct.**

24 **Q.** It's a way you look at a problem to work
25 out the problem; correct?

1 **A. That's correct.**

2 **Q.** And so in working out that problem of
3 what caused Ms. Neuman's death on October 19, 2009,
4 when you conducted the autopsy, you would have
5 included in your differential diagnosis
6 organophosphate toxicity; correct?

7 **A. That's correct.**

8 **Q.** And based upon the same evidence that
9 we've reviewed that you had on the 19th; correct?

10 **A. That's correct.**

11 **Q.** If you had -- if we could go back in time
12 and you could have included that in your
13 differential diagnoses, Dr. Mosley, there were a
14 number of things that you probably would have done;
15 correct?

16 **A. Yes.**

17 **Q.** For example, one, you might have called
18 the doctors at Flagstaff Medical Center; correct?

19 **A. I might have.**

20 **Q.** You might have spoken to the case agent,
21 Detective Diskin; correct?

22 **A. Correct.**

23 **Q.** And, by the way, did Detective Diskin in
24 your investigation ever tell you that he suspected
25 as early as October 9, 2009, at the scene that

1 toxins might have been in play?

2 **A. He wouldn't -- well, I don't recall if he**
3 **did or not. But he wouldn't have had to because**
4 **it's in the medical records that the doctors**
5 **suspected toxins might be in play.**

6 **Q.** Sure. But as the case agent, you would
7 expect that he would provide you with all relevant
8 information from the scene; correct?

9 **A. Yes.**

10 **Q.** And that's what we talked about when you
11 based your conclusion of February 2, 2010, was that
12 it was entirely on circumstances reported to you;
13 correct?

14 **A. Yes.**

15 **Q.** It would have been an important
16 circumstance for the detective to have told you
17 that on October 9, 2009, he had believed while at
18 the scene that toxins might have been an issue;
19 correct?

20 **A. Correct.**

21 **Q.** And so if you could turn back the clock
22 and go back to the time you did your autopsy and
23 work out this problem, including the possibility of
24 organophosphate toxicity, if Detective Diskin also
25 told you, now a second source in addition to the

1 records, that he might have suspected toxins, you
2 might have done things differently; correct?

3 **A. I'm sorry. I'm just wondering what would**
4 **I have done differently. I probably would have --**
5 **well, ask them to tell me what the source of the**
6 **organophosphates is, where at the scene did you**
7 **find the organophosphates, and why should I -- how**
8 **can I confirm that organophosphates are poisoning**
9 **these people.**

10 **Q.** And I'm not suggesting by my question
11 that Detective Diskin knew that there was
12 organophosphates on the date of October 8 or
13 October 9. Okay?

14 What I'm asking you is, for whatever
15 reason, the detective believes toxins, whatever
16 toxins, were an issue, that would be relevant
17 information that you should have had; correct?

18 **A. Yes.**

19 **Q.** And do you recall whether or not
20 Detective Diskin ever coming to you before you did
21 your autopsy and telling you that it was his
22 suspicion toxins could have been an issue?

23 **A. I did not.**

24 **Q.** Now, my question to you is this: If on
25 October 9 the detective suspected toxins, whatever

1 toxins -- and I'm not saying organophosphates, but
2 just toxins. If he had come to you or any of the
3 MEs at the time and told you that, you could have,
4 for one, asked that all of the blood samples taken
5 of the participants including the two that deceased
6 on the 9th be kept; correct?

7 **A. I could have. But -- well, I don't have**
8 **any jurisdiction over those other people. I think**
9 **it would have been a wise thing to do. I don't**
10 **know if I would have anticipated doing that.**

11 **Q.** Sure. I understand. Again, I know
12 hindsight is 20/20. But if you had all this
13 information and you had given significance to these
14 findings at the relevant time, Dr. Mosley, you
15 could have at least made the suggestion that fresh
16 blood samples be kept; correct?

17 **A. Yes.**

18 **Q.** And when you say you didn't have
19 jurisdiction, I understand you didn't have
20 jurisdiction over the bodies of Ms. Brown or
21 Mr. Shore. But you certainly had jurisdiction over
22 Ms. Neuman and the three others who were critically
23 ill at the Flagstaff Medical Center; correct?

24 **A. Only if they die do I have jurisdiction.**

25 **Q.** Understood.

1 On October 8th, though, on the night of
2 the accident, your colleague, Dr. Czarnecki --

3 **A. Yes.**

4 **Q.** -- and a couple forensic investigators
5 did go to the scene; correct?

6 **A. Correct.**

7 **Q.** That would indicate to me that Coconino
8 County Medical Examiner was involved in the
9 investigation. Correct?

10 **A. Correct.**

11 **Q.** At that time none of the folks at
12 Flagstaff or in Coconino had deceased; correct?

13 **A. That's correct.**

14 **Q.** Since Coconino County Medical Examiner
15 had opened an investigation on the night of the
16 accident, if you had some suggestion that toxicity,
17 either from the medical records if you had given it
18 significance at that time, or from the detective,
19 your office could have asked for samples to be
20 kept; correct?

21 **A. Yes.**

22 **Q.** Another test that could have been done in
23 addition to testing the blood for organophosphate
24 compounds is to look at the fresh blood samples for
25 cholinesterase levels; correct?

1 A. Yes.
 2 Q. And, as you explained to the jury
 3 yesterday, what organophosphates do is inhibit a
 4 particular enzyme; correct?
 5 A. Yes.
 6 Q. It increases in the blood levels
 7 cholinesterase; correct?
 8 A. The -- it's the --
 9 Q. Cholinesterase activity?
 10 A. Thank you.
 11 Q. So another way to have identified the
 12 possibility of organophosphate toxicity was to look
 13 at the fresh blood samples for that particular
 14 enzyme activity; correct?
 15 A. Correct.
 16 Q. Now, at some point the state did ask you
 17 to test the blood sample of Liz Neuman; correct?
 18 A. Yes.
 19 Q. Can you tell the jury when that occurred.
 20 A. February or March of this year. I'm not
 21 sure. I don't remember the date exactly.
 22 Q. Certainly this year; correct?
 23 A. Yes.
 24 Q. Somewhere in February, March, you
 25 believe; correct?

1 A. Yes.
 2 Q. And who called you to ask you to test Liz
 3 Neuman's blood sample?
 4 A. Detective Diskin.
 5 Q. And what did Detective Diskin ask you to
 6 do?
 7 A. Essentially, send a sample of
 8 Ms. Neuman's blood to the lab, the toxicology
 9 laboratory, that had analyzed the samples on the
 10 other two decedents for -- analyze those samples
 11 for organophosphates -- well, to analyze them for
 12 the presence of organophosphates.
 13 Q. Thank you.
 14 Did Detective Diskin tell you or ask you
 15 to test Liz Neuman's blood for the presence of
 16 organophosphates after the interview with Dr. Ian
 17 Paul?
 18 A. Yes.
 19 Q. And do you remember whether or not
 20 Detective Diskin told you that he wanted it tested
 21 to, essentially, test Dr. Paul's conclusion?
 22 A. Yes.
 23 Q. And that means that Detective Diskin,
 24 after sitting in the interview of Dr. Paul, asked
 25 you to test for organophosphates in order to,

1 essentially, debunk Dr. Paul's conclusion; correct?
 2 MR. HUGHES: Objection. Speculation. He
 3 could have confirmed the opinion.
 4 MS. DO: I think I'm asking the question.
 5 MR. HUGHES: Calls for a legal conclusion.
 6 THE COURT: Sustained.
 7 MS. DO: All right.
 8 Q. Doctor, let me rephrase.
 9 What I'm asking you is, did Detective
 10 Diskin tell you he wanted you to test for
 11 organophosphates because he wanted to know the
 12 truth of whether or not organophosphates caused the
 13 deaths of these people?
 14 A. As I remember the conversation, it went
 15 something like this: In the conversation with
 16 Dr. Paul, Dr. Paul was asked if the samples were
 17 tested for organophosphates and were negative,
 18 would you reject organophosphates as a potential
 19 cause of death?
 20 That was the understanding that I had as
 21 to why I was doing this.
 22 Q. Okay. And obviously you weren't present
 23 for Dr. Paul's interview; correct?
 24 A. Yes.
 25 Q. Do you know whether or not that interview

1 was tape-recorded?
 2 A. I assume it was.
 3 Q. And so I understand that's your belief
 4 and impression of what Detective Diskin told you
 5 regarding Dr. Paul's statement. But you would
 6 defer to the tape to see what he actually said;
 7 correct?
 8 A. Correct.
 9 Q. Now, when Detective Diskin asked you to
 10 test for organophosphates, that was directly in
 11 response to something Dr. Paul said on the
 12 interview; correct?
 13 A. Correct.
 14 Q. Now, after he asked you to test for
 15 organophosphates, you gave him an opinion about
 16 whether or not that was a wise thing to do;
 17 correct?
 18 A. Well, yes.
 19 Q. You talked to him about it; correct?
 20 A. Yes.
 21 Q. Let me just confirm with you. At some
 22 point Detective Diskin also emailed you the lab
 23 results from NMS? That's a lab that you sent her
 24 sample to; correct?
 25 A. Correct.

1 Q. And at some point Detective Diskin
2 provided you with the results from Ms. Shore (sic
3 throughout) and Mr. Brown's (sic throughout)
4 samples; correct?
5 A. Correct.
6 Q. I'm going to show you what's been
7 admitted as Exhibit 811. Do you recognize those to
8 be the reports that Detective Diskin emailed to
9 you?
10 A. Yes.
11 Q. They are? And those results came in from
12 the lab on February 8, 2011; correct?
13 A. Yes.
14 Q. Now, after the February 8, 2011, you then
15 got results back from the same lab regarding
16 Ms. Neuman; correct?
17 A. Correct.
18 MS. DO: Your Honor, I move into admission
19 Exhibit 998. Mr. Hughes has agreed.
20 MR. HUGHES: No objection, Your Honor.
21 THE COURT: 998 is admitted.
22 (Exhibit 998 admitted.)
23 Q. BY MS. DO: Showing you 998, do you
24 recognize that to have a transmittal sheet that
25 came from you -- a fax transmittal sheet?

1 A. Yes.
2 Q. Behind that fax transmittal sheet are the
3 results from the lab; correct?
4 A. They are.
5 Q. And the lab results on Ms. Neuman came
6 back on March 5, 2011; correct?
7 A. Yes. That's correct.
8 Q. I want to go back to what you told
9 Detective Diskin when he asked you to test the
10 result -- test the samples for Ms. Neuman. Okay?
11 A. Right. It was in response to another
12 email, basically, saying that -- or maybe it might
13 have come from defense counsel about the
14 interpretation of the results by the toxicologist
15 and how they had concerns about, well, what would
16 make the analysis difficult to interpret,
17 basically, and how that is -- how the sample was
18 stored.
19 So I wrote an email, basically, saying we
20 don't -- I still have these tubes. I don't have to
21 send them. I thought because interpretation would
22 be so difficult that maybe we shouldn't send them.
23 Q. Okay. Let me try and trace back to the
24 information provided the jury. You got an email
25 about the reliability or not of the test results on

1 Ms. Shore and Mr. Brown; correct?
2 A. Yes.
3 Q. And I'm going to show you what's been
4 marked as Exhibit 101. Do you recognize this to be
5 an email from a person named Penny Kramer?
6 A. I do.
7 Q. Do you know Penny Kramer to be the
8 administrative assistant to the county attorney,
9 Ms. Polk?
10 A. Yes.
11 Q. You see in the "to" line, Dr. Fischione,
12 Dr. Lyon and Dr. Mosley; correct?
13 A. Yes.
14 Q. And the date of that email is March 3,
15 2011; correct?
16 A. Correct.
17 Q. And attached -- and you received this;
18 correct?
19 A. Yes.
20 Q. And this was part of your continuing
21 investigation into the cause of Ms. Neuman's death;
22 correct?
23 A. Correct.
24 Q. Attached to that March 3rd email is a
25 letter written by Mr. Hughes dated March 2, 2011;

1 correct?
2 A. Correct.
3 Q. Do you know whether or not that's one day
4 after the opening statement in this case?
5 A. I did not know that. I don't know when
6 this case started.
7 Q. Okay. The letter from Mr. Hughes is
8 addressed to Luis Li; correct?
9 A. Yes.
10 Q. You met Mr. Li before?
11 A. Yes.
12 Q. It shows it was hand delivered; correct?
13 A. Yeah. It does.
14 Q. And so on March 3rd, Penny Kramer,
15 Ms. Polk's assistant, emailed you a copy of the
16 letter dated March 2nd that was provided to Mr. Li
17 for the defense; correct?
18 A. Correct.
19 Q. And in this letter Mr. Hughes was
20 informing him that they talked to an NMS lab
21 technician named Dr. Blume; correct?
22 A. Yes.
23 Q. Who advised the state that the testing
24 done at this late date was problematic; correct?
25 A. Yes.

1 Q. What was the exact language in that
2 letter?

3 A. **The state has been informed by a lab**
4 **employee, Dr. Blume, that the organophosphates test**
5 **result may not be significant due to the passage of**
6 **time between when the blood was drawn and the time**
7 **Blume lab tested the samples. Blume also indicated**
8 **that the result of the test could be affected by**
9 **the way the blood samples were stored. And then**
10 **parenthetically he said, frozen or refrigerated.**

11 Q. That letter then prompted you to write an
12 email back to the state; correct?

13 A. **Yes.**

14 Q. And in that email is when you told the
15 state that you thought it was a waste of time and
16 money to test; correct?

17 A. **I did.**

18 Q. And that was because it was your belief
19 that testing at this late date, almost 17 months
20 later, was a waste of time; correct?

21 A. **Yes.**

22 Q. In fact, you previously have said that it
23 would be a dangerous thing to do?

24 A. **Well, I might have. I don't recall**
25 **saying that. But --**

1 Q. Okay. Well, we'll go to your transcript.
2 Do you remember saying it was a foolish thing to
3 do?

4 A. **I don't remember.**

5 Q. It's okay. Now, when you got that
6 letter, you then emailed Ms. Kramer on behalf of
7 the state, and you told Ms. Kramer at that point
8 that you believed the organophosphates argument
9 could be dismantled on the basis of the clinical
10 data collected on the participants of the sweat
11 lodge ceremony. That is to say, I believe there
12 are findings are inconsistent with organophosphate
13 toxicity. Correct?

14 A. **Correct.**

15 Q. As you told this jury yesterday, after
16 reviewing all the evidence and reaching your
17 revised opinion, you take back that entire
18 statement; correct?

19 A. **Yes.**

20 Q. So you've been candid. People do make
21 mistakes. You were wrong in that statement;
22 correct?

23 A. **Yes.**

24 Q. Sort of jumped to a conclusion; correct?

25 A. **I did.**

1 Q. Now, when you talked to Detective Diskin
2 or anyone from the state, you did advise them that
3 to test something now with the passage of time was
4 going to be like a shot in the dark; correct?

5 A. **I'm not -- I don't recall my exact**
6 **phrasing, but that sounds reasonable.**

7 Q. I don't want to put words in your mouth,
8 Doctor. I'm going to show you your transcript of
9 our conversation on April 19. And I'll ask you to
10 look at page 8, line 17 to 20.

11 And this is Exhibit 997, Mr. Hughes.

12 Just read it to yourself, please.

13 A. **Okay.**

14 Q. So after looking at that, you did tell
15 Detective Diskin when he made the request to test
16 at this date, given the passage of time, that it
17 would be something like a shot in the dark;
18 correct?

19 A. **If I could just read the transcript here.**

20 Q. Can you give me one moment to get on the
21 same page?

22 A. **Sure.**

23 THE COURT: Ms. Do, we are going to take our
24 morning recess at this time.

25 Ladies and gentlemen, remember the

1 admonition. Please be reassembled at five till,
2 about 15 minutes.

3 Dr. Mosley, you're excused at this time.

4 (Recess.)

5 THE COURT: The record will show the presence
6 of Mr. Ray, the attorneys, the jury. Dr. Mosley is
7 on the witness stand.

8 Ms. Do, you may continue.

9 MS. DO: Thank you, Your Honor.

10 Q. Dr. Mosley, thank you so much for your
11 patience.

12 Before we took the break, I was asking
13 you questions about the conversation that you had
14 with Detective Diskin after he requested in either
15 February or March of 2011, this year, that
16 Ms. Neuman's blood be tested for organophosphates.
17 So let's pick it up from there.

18 You have had a chance at the break to
19 review the transcript of our conversation on
20 April 19, 2011?

21 A. **I have.**

22 Q. And it is true that you told
23 Detective Diskin at the time he made the request --
24 you told him that, given the passage of time, it
25 would be something like a shot in the dark;

1 correct?

2 **A. That is, essentially, what I was trying**
3 **to communicate.**

4 **Q.** And what you were trying to communicate
5 to Detective Diskin was, given the passage of time
6 and also the information confirmed in the letter by
7 Mr. Hughes in Exhibit 1001, that the reliability of
8 the test is also affected by the way the sample is
9 preserved; correct?

10 **A. Correct.**

11 **Q.** So if it's a frozen sample, that's going
12 to create problems in terms of testing; correct?

13 **A. Correct.**

14 **Q.** And in this case, Ms. Neuman's sample was
15 frozen; correct?

16 **A. Correct.**

17 **Q.** And, to your knowledge, so was
18 Mr. Brown's and Ms. Shore's; correct?

19 **A. I don't know about their samples.**

20 **Q.** That's fine. But based upon the letter
21 that was emailed to you by Penny Kramer, March 3rd,
22 it does seem to indicate that that was the problem
23 with Mr. Shore and Ms. Brown; correct?

24 Do you want to see the letter again?

25 **A. Yes.**

1 **Q.** Handing you Exhibit 1001.
2 Your Honor, I move for the admission of
3 1001.

4 MR. HUGHES: No objection.

5 THE COURT: 1001 is admitted.

6 (Exhibit 1001 admitted.)

7 THE WITNESS: Well, it doesn't specifically
8 say that the samples were frozen or refrigerated,
9 just that -- all I assumed from that sentence is
10 that if they were, it could affect the results.

11 **Q.** BY MS. DO: Okay. Are samples taken at
12 autopsy typically frozen?

13 **A. Eventually.**

14 **Q.** All right. We'll clear that up. But
15 obviously it's not something that you would know
16 about?

17 **A. Okay.**

18 **Q.** With regards to Mr. Brown and Ms. Shore;
19 correct?

20 **A. Correct.**

21 **Q.** Now, you also told -- what you were
22 trying to tell Detective Diskin was that, given the
23 passage of time and the manner in which
24 Ms. Neuman's sample was reserved, that is frozen,
25 that it would be foolish to derive any information

1 from a negative test; correct?

2 **A. Right. I guess for me I'm reluctant to**
3 **order a test that I don't know how to interpret. I**
4 **mean, I generally don't do that unless I know**
5 **someone who can interpret it. I rely on the**
6 **toxicologists to a great extent for interpreting**
7 **the results and to tell me what the limitations are**
8 **in their interpretation.**

9 **And the other problem is if you have a**
10 **test result and you don't understand the caveats of**
11 **the interpretation, then you're likely to come to**
12 **wrong conclusions.**

13 **Q.** Correct. So let me ask you these
14 questions.

15 First, if I haven't already, Your Honor,
16 I'd like to move into evidence Exhibit 998, which
17 is Ms. Neuman's records. Do you have them?

18 THE COURT: I have 998 admitted.

19 MS. DO: Thank you, Your Honor.

20 **Q.** You could reach the wrong conclusions is
21 what you said; correct?

22 **A. Well, someone who doesn't understand the**
23 **test could reach the wrong conclusion.**

24 **Q.** I understand you're not a toxicologist.

25 But Dr. Blume from NMS, the doctor who provided the

1 information to Mr. Hughes contained in the letter,
2 Exhibit 1001, is a toxicologist; correct?

3 **A. As I understand it, yes.**

4 **Q.** Within your experience and your
5 knowledge, however, you do have a belief that to
6 test something -- to test an autopsy sample more
7 than a week after someone has died would be -- and
8 to take an interpretation of that sample would be
9 dangerous or foolish; correct?

10 **A. In this particular case, in this**
11 **instance, yes.**

12 **Q.** What you mean when you say it's dangerous
13 or foolish is to say that because of the passage of
14 time, some 17 months or more, and the way in which
15 the sample was preserved, to look at a negative
16 result and say, it wasn't there, that could be a
17 wrong conclusion; correct?

18 **A. Correct.**

19 **Q.** So what you're telling the jury is that
20 even though the negative results on Ms. Neuman and
21 Mr. Shore or Ms. Brown, those negative results does
22 not mean you can say organophosphates weren't
23 there; correct?

24 **A. That's correct.**

25 **Q.** You told the jury in direct that

1 hospitals typically keep -- just so we're clear,
 2 the negative results on those organophosphate
 3 testing does not tell you that it wasn't there;
 4 correct?
 5 **A. That's correct.**
 6 **Q.** You told the jury on direct that most
 7 hospitals will keep admission blood for seven days;
 8 correct?
 9 **A. Correct.**
 10 **Q.** And by "admission blood," you mean when
 11 somebody comes into the ER and blood is drawn, that
 12 blood is kept for seven days?
 13 **A. Yes.**
 14 **Q.** Your revised opinion today regarding the
 15 consistency of the signs and symptoms with
 16 organophosphates is based on information that you
 17 had back at the time of autopsy; correct?
 18 **A. Yes.**
 19 **Q.** It's information that the state had at
 20 the time of autopsy; correct?
 21 **A. Yes.**
 22 **Q.** In fact, we can even go back further
 23 because that information was available on the day
 24 of the accident and the day after the accident
 25 because the ER doctors noted those signs and

1 symptoms that night; correct?
 2 **A. Correct.**
 3 **Q.** And so if somebody had looked at these
 4 records, talked to the doctors, they would have,
 5 based upon the signs and symptoms, thought maybe we
 6 should look at organophosphate toxicity; correct?
 7 MR. HUGHES: Objection. Foundation,
 8 speculation.
 9 THE COURT: Overruled.
 10 You may answer that, if you can.
 11 THE WITNESS: I'm sorry. One more time.
 12 **Q.** BY MS. DO: Because the information that
 13 we're talking about now that leads you to be unable
 14 to exclude organophosphates, to lead you to the
 15 conclusion now that you have doubts about your
 16 cause of death being only hyperthermia -- that
 17 information was available if somebody wanted it on
 18 October 8, 2009; correct?
 19 **A. Correct.**
 20 **Q.** It was available if somebody was looking
 21 for it on October 9; correct?
 22 **A. Correct.**
 23 **Q.** And based on that same evidence, if
 24 somebody had figured it out, they would have
 25 thought we should be looking at organophosphates as

1 a possibility; correct?
 2 **A. Correct.**
 3 **Q.** And if someone had figured it out within
 4 those first two days, those 48 hours, somebody
 5 could have called the hospital and said, keep all
 6 the admission blood samples before the seven days
 7 expire; correct?
 8 **A. Correct.**
 9 **Q.** And if that had been done, you could have
 10 tested the blood samples for the actual compound;
 11 correct?
 12 **A. As I understand it, yes. That's correct.**
 13 **Q.** Which is what you did with NMS Labs in
 14 February or March of this year; correct?
 15 **A. Correct.**
 16 **Q.** You could have also run another test
 17 looking at the blood samples for what we talked
 18 about, the cholinesterase activity; correct?
 19 **A. Correct.**
 20 **Q.** And that's, basically, a marker, a
 21 biological marker, that there were
 22 organophosphates; correct?
 23 **A. Right. If the cholinesterase in the**
 24 **blood is poison, then there should be less**
 25 **cholinesterase activity in the sample because it's**

1 **been blocked.**
 2 **Q.** It's, basically, a clue, a tell-tale sign
 3 that we're looking at organophosphates; correct?
 4 **A. Yes.**
 5 **Q.** Now, because, as you indicate to the
 6 jury, the hospital only keeps these blood samples
 7 for seven days, and you also believe that to test
 8 something a week after someone has died is foolish
 9 or dangerous, the testing would have had to be done
 10 relatively immediately; correct?
 11 **A. The only problem I have with that**
 12 **question is the part in the middle about to test**
 13 **someone's blood a week after. It sounds like a**
 14 **general statement applied to more than Ms. Neuman.**
 15 **There are details you can glean from testing**
 16 **someone's blood after more than a week away. But**
 17 **in this particular case -- I'm sorry. Can we try**
 18 **that again.**
 19 **Q.** Sure. My question is just this,
 20 Dr. Mosley: It is your belief if you were going to
 21 get a meaningful test for organophosphate toxicity,
 22 which was indicated by the signs and symptoms of
 23 people on the night of October 8, you would have to
 24 do it, one, when the samples are available;
 25 correct?

1 **A. Yes.**
 2 **Q.** And that would be for seven days with
 3 respect to the participants who survived; correct?
 4 **A. Yes.**
 5 **Q.** And you would have to do it within at
 6 least a week, according to your opinion, after an
 7 autopsy sample is taken; correct?
 8 **A. I'm sorry. That last part again. At**
 9 **least a week after the autopsy specimen is taken --**
 10 **I'm sorry. Just run that by me one more time.**
 11 **Q.** Feel free to correct my question if there
 12 is some part of it you don't agree with.
 13 What I'm asking you is this: Samples of
 14 blood and other tissues are taken at the time of
 15 autopsy; correct?
 16 **A. Correct.**
 17 **Q.** You're not sure, as you told the jury
 18 yesterday, what the half-life, meaning how long the
 19 organophosphate compound, if it's there, will stay
 20 in a blood sample; correct?
 21 **A. Correct.**
 22 **Q.** So because of the relative instability,
 23 meaning it's something that doesn't stay for a long
 24 time, you would have to test immediately; correct?
 25 **A. I think it depends on the**

1 **organophosphates. There are different chemicals.**
 2 **Some would have longer half-lives than others.**
 3 **Q.** Sure. And on that, can you tell the jury
 4 how many different compounds there are of
 5 organophosphates.
 6 **A. Gosh. There is -- well, there is**
 7 **probably more than 99.8752 of them, maybe**
 8 **thousands. But in this case I think we're only**
 9 **talking about ones that are commonly used as**
 10 **pesticides, so we can narrow the universe of**
 11 **organophosphates to some extent.**
 12 **I'm not really sure how many**
 13 **organophosphates are reasonable possibilities for**
 14 **being the source of the toxicity if it is, indeed,**
 15 **organophosphate toxicity.**
 16 **Q.** Fair to say that there are a lot?
 17 **A. Yes.**
 18 **Q.** Now, what I'm asking you is this: You
 19 know that Mr. Ray was indicted on February 3, 2010;
 20 correct?
 21 **A. I don't know that.**
 22 **Q.** Any reason to dispute that?
 23 **A. I have no reason to dispute that.**
 24 **Q.** If that was true, he was indicted one day
 25 after you issued your report; correct?

1 **A. Yes.**
 2 **Q.** Which means that for those four months
 3 Mr. Ray did not have any control over your
 4 investigation; correct?
 5 **A. Correct.**
 6 **Q.** Mr. Ray had no control over the state's
 7 investigation; correct?
 8 **A. Correct.**
 9 **Q.** Or the Sheriff's investigation; correct?
 10 **A. Correct.**
 11 **Q.** And so even though the samples were never
 12 preserved, Mr. Ray would not have had a meaningful
 13 opportunity to have tested the samples; correct?
 14 MR. HUGHES: Objection, Your Honor.
 15 THE COURT: Sustained.
 16 **Q.** BY MS. DO: Now, going back to your
 17 conclusion here, Doctor, you do believe that the
 18 signs and symptoms of miosis and frothy sputum are
 19 inconsistent with heat stroke; correct?
 20 **A. Yes.**
 21 **Q.** They are consistent with
 22 organophosphates; correct?
 23 **A. Yes.**
 24 **Q.** You cannot exclude them; correct?
 25 **A. Correct.**

1 **Q.** And based upon your review of Mr. --
 2 or Dr. Paul's report, and looking at the signs and
 3 symptoms in the records, you do believe that
 4 Dr. Paul could be right; correct?
 5 **A. Could be. It's possible.**
 6 **Q.** And so at this date, what you have are
 7 doubts about whether or not this is only about
 8 heat; correct?
 9 **A. I do.**
 10 **Q.** As you sit here today, you have doubts;
 11 correct?
 12 **A. I have doubts about whether or not this**
 13 **is only about heat.**
 14 **Q.** Okay. Now, I want to talk to you a
 15 little bit about heat. You use the term
 16 "hyperthermia."
 17 **A. Yes.**
 18 **Q.** And Dr. Lyon used the term called "heat
 19 stroke."
 20 **A. Yes.**
 21 **Q.** I want to talk to you a little bit about
 22 what the difference is between those two.
 23 **A. Okay.**
 24 **Q.** You told the jury yesterday that
 25 hyperthermia is a little bit less specific than

1 heat stroke; correct?
 2 **A. It is.**
 3 **Q.** And you described it as being too hot;
 4 correct?
 5 **A. Yes.**
 6 **Q.** You told this jury under direct yesterday
 7 that too hot is anywhere above 101.5 degrees
 8 Farenheit; correct?
 9 **A. Yes. Although some might consider 101**
 10 **degrees Farenheit hyperthermia.**
 11 **Q.** But that's the definition you gave the
 12 jury yesterday?
 13 **A. Yes.**
 14 **Q.** Too hot?
 15 **A. Yes.**
 16 **Q.** When your body has reached a core
 17 temperature of 101.5 degrees Fahrenheit; correct?
 18 **A. Yes.**
 19 **Q.** When Mr. Li and I interviewed you on
 20 May 21, 2010, we discussed your definition of
 21 hyperthermia; correct?
 22 **A. Yes.**
 23 **Q.** Do you remember that?
 24 **A. No.**
 25 **Q.** We have a transcript if you need to

1 review. But on that date do you remember telling
 2 Mr. Li and me that hyperthermia is simply being too
 3 hot?
 4 **A. Yes.**
 5 **Q.** And do you remember me asking you, what
 6 does too hot mean?
 7 **A. I do.**
 8 **Q.** Do you remember what your first answer
 9 was?
 10 **A. Yes.**
 11 **Q.** What was it?
 12 **A. I think I said that, well, did you see**
 13 **the Miss U.S.A. pageant last week?**
 14 **Q.** Okay. That was a bit more of your humor;
 15 correct?
 16 **A. Yes.**
 17 **Q.** But then after, you gave me a serious
 18 answer when I asked you: Okay. Putting aside the
 19 Miss U.S.A. pageant, what does too hot mean in
 20 terms of temperature?
 21 Do you remember that?
 22 **A. I'm not sure how I answered it at that**
 23 **time.**
 24 **Q.** Let me -- would it help you to look at
 25 your transcript?

1 **A. Sure.**
 2 **Q.** I'm going to show you Exhibit 683, the
 3 transcript of that May 21, 2010, interview. We'll
 4 start at page 24, line 8, where you asked me if I
 5 watched the pageant.
 6 **A. What line do you want me to start at?**
 7 **Q.** Let's start at line 8.
 8 **A. Well, did you watch the Miss U.S.A. --**
 9 **Q.** Give me one second. What page did I give
 10 you?
 11 **A. 24.**
 12 **Q.** Thank you. So go ahead and start reading
 13 line 8, please. Well, actually, let me start at
 14 line 7.
 15 I asked you: When you say, too hot, what
 16 is too hot?
 17 And you said?
 18 **A. Let's see. Well, did you watch the**
 19 **Miss U.S.A. contest the other night? I'm sorry.**
 20 **Q.** And then I asked you what?
 21 **A. And I said, never mind.**
 22 **Q.** Mr. Li said?
 23 **A. Miss U.S.A.**
 24 **Q.** I said, okay.
 25 **MR. HUGHES: Objection, Your Honor. If we're**

1 going to read the transcript, I would have no
 2 objection to moving the entire transcript in.
 3 Otherwise, I think the witness should refresh his
 4 memory, and Ms. Do can ask the question.
 5 **THE COURT: Overruled.**
 6 You may proceed.
 7 **MS. DO: Thank you, Your Honor.**
 8 **Q.** I said, okay.
 9 And at line 14, you said?
 10 **A. It's the -- too hot is when --**
 11 **Q.** And Mr. Li said, you obviously watched
 12 it.
 13 And you said?
 14 **A. I'm sorry -- Mr. Li again.**
 15 **Q.** What did he say, though?
 16 **A. All the men immediately understood what**
 17 **he meant.**
 18 **He said, I would have understood it if I**
 19 **heard. It was a little under your breath.**
 20 **Yeah.**
 21 **Q.** And then your serious answer about what
 22 too hot --
 23 **A. So the statement was, but, like, 107,**
 24 **107 degrees Farenheit, people are --**
 25 **THE REPORTER: Excuse me. Could you read that**

1 a little slower?

2 THE WITNESS: Yes, ma'am.

3 So the -- so -- you know -- but, like,

4 107, 107 degrees Fahrenheit, people are too hot to

5 maintain their normal body functions. So their

6 brain is reacting, is telling it -- and they --

7 they're shunting blood to the periphery to use the

8 evaporation effect, and sweating is enhanced.

9 There is a lot of physiological changes

10 that come, and your heart is pumping a lot faster

11 to move blood and try to cool itself. When it's so

12 hot that your life is in danger, that's too hot.

13 Q. BY MS. DO: So on May 21, 2010, when I

14 asked you what is too hot or hyperthermia, you told

15 us 106 to 107; correct?

16 A. Yes.

17 Q. Now, you're explaining what you just read

18 in there, the matter about shunting blood and the

19 physiological changes. You're explaining the

20 pathophysiology of heat on the body; correct?

21 A. Yes.

22 Q. And so the normal body temperature is

23 98.6 degrees Fahrenheit?

24 A. Yes.

25 Q. And the body has a natural way of

1 maintaining that temperature; correct?

2 A. Correct.

3 Q. And so we take in heat from the

4 environment; correct?

5 A. Yes.

6 Q. And through our normal processes, the

7 metabolic processes, we also create heat; correct?

8 A. Yes.

9 Q. And in order to maintain our normal body

10 temperature, we have to throw off the heat that we

11 take in and the heat that we create; correct?

12 A. Correct.

13 Q. And the way the body does that, as you

14 explained here, is that it starts shunting blood to

15 the surface?

16 A. Yes.

17 Q. And what you mean by that is the body

18 starts sending blood away from the central parts of

19 our body to the skin; correct?

20 A. Right. It's trying to act as a radiator,
21 basically.

22 Q. By sending -- and the blood at this point

23 is heated; correct?

24 A. Correct.

25 Q. So by sending the heated blood to the

1 skin, the body is increasing the mass for the

2 surface area; correct, for one?

3 A. Yes. Okay.

4 Q. And that is to increase the surface area

5 on which you can throw off the heat; correct?

6 A. Correct.

7 Q. When the body does that, as you explained

8 here, it's sort of like a Rube Goldberg cartoon.

9 Lots of things start happening; correct?

10 A. Correct.

11 Q. Like a chain reaction?

12 A. Yes.

13 Q. And when the body carries blood away from

14 the central region to the skin, it deprives the

15 organs of oxygen; correct?

16 A. Yes.

17 Q. It also sends away water and electrolytes

18 to the organs; correct?

19 A. Correct.

20 Q. Which causes dehydration, for one?

21 A. Yes.

22 Q. The second thing the body is going to do

23 to try and cool the body down is to start sweating

24 immediately; correct?

25 A. Yes.

1 Q. That's the No. 1 cooling mechanism that

2 our body has; correct?

3 A. That's correct.

4 Q. So in addition to shunting blood, which

5 causes dehydration, the sweating also causes

6 dehydration; correct?

7 A. Yes.

8 Q. The dehydration itself could start

9 causing a lot of problems for the body; correct?

10 A. Yes.

11 Q. One could include inducing a coma;

12 correct?

13 A. Yes.

14 Q. Because the brain swells?

15 A. That's correct.

16 Q. Okay. So in your definition of

17 hyperthermia, too hot, meaning dangerous for the

18 body, as you told us on May 21, is 106, 107;

19 correct?

20 A. That's correct. That's what I said.

21 Yes.

22 Q. Okay. And in this case, Ms. Neuman, to

23 your knowledge, had no evidence of dehydration;

24 correct?

25 A. I'm not sure if there was no evidence or

1 **if there was mild dehydration. But let's just**
2 **assume that she had no dehydration.**

3 **Q.** There are chemistry or lab results that
4 would tell you that; correct?

5 **A. Yes.**

6 **Q.** If Dr. Cutshall testified to the jury
7 that based upon the labs that she was not even
8 mildly dehydrated, would you dispute that?

9 **A. No.**

10 **Q.** She had no evidence of dehydration. And
11 you also note that the highest temperature she
12 reached was 101.7 degrees Fahrenheit; correct?

13 **A. That's correct.**

14 **Q.** So you didn't have objective medical
15 data, such as dehydration and a core temperature of
16 106 to 107, and you reviewed her medical records
17 looking for that evidence; correct?

18 **A. Yes.**

19 **Q.** And in reviewing her medical records for
20 that evidence, it was because you were looking for
21 objective, hard, medical data to evidence heat
22 stroke or hyperthermia; correct?

23 **A. Correct.**

24 **Q.** And you didn't find it?

25 **A. Well, a 101.7, which was her earliest**

1 **recorded temperature -- I think that might be 45**
2 **minutes after EMS arrived -- was 101.7, which**
3 **technically speaking, is hyperthermia.**

4 **Q.** But not under the definition you provided
5 to us on May 21; correct?

6 **A. Yeah. That's wrong. I made a mistake.**

7 **Q.** Okay. So you were mistaken on May 21
8 about what hyperthermia --

9 **A. Well, 106, 107, would certainly be**
10 **hyperthermia, but the cutoff is much lower than**
11 **that.**

12 **Q.** Okay. But you did not tell Mr. Li or I
13 that; correct?

14 **A. I did not.**

15 **Q.** Okay. So when you looked through
16 Ms. Neuman's records for hard evidence of heat
17 stroke, you didn't find it; correct?

18 **A. That's correct.**

19 **Q.** So you had to rely on circumstantial
20 evidence?

21 **A. That's correct also.**

22 **Q.** Could you tell the jury what
23 circumstances you relied on to reach your
24 conclusion that hyperthermia was the cause of
25 death.

1 **A. Witness statement, people who were**
2 **actually there in the sweat lodge. Very early on**
3 **in the case, I received a bunch of newspaper from**
4 **the prosecutor about -- that had witness**
5 **statements.**

6 **Q.** So based upon -- and obviously you didn't
7 interview these witnesses; correct?

8 **A. That's correct.**

9 **Q.** And you're saying you got these early on?

10 **A. Yes.**

11 **Q.** When did you get them?

12 **A. I don't know.**

13 **Q.** That's okay, Doctor. Let's move on from
14 there.

15 You obviously were relying on hearsay;
16 correct?

17 **A. Hearsay. Yes.**

18 **Q.** When I asked you this question of -- do
19 you remember on May 21 me asking you, please state
20 all the circumstances and the facts that form the
21 basis of your conclusion that this was
22 hyperthermia?

23 Do you remember that question?

24 **A. Not specifically. But sounds like**
25 **something that I was probably asked and probably**

1 **answered.**

2 **Q.** And do you remember telling me that it
3 was the fact that she was found in a sweat lodge
4 unresponsive and no other pathology?

5 Do you remember giving me that answer?

6 **A. I don't. But I believe that I said it.**

7 **Q.** If you want -- do you want to review your
8 transcript?

9 **A. No.**

10 **Q.** So you told me on May 21 that all of the
11 circumstances and the facts upon which you base
12 your conclusion that she died in part or died of
13 hyperthermia is the fact that she's found in a
14 sweat lodge; correct?

15 **A. Yes.**

16 **Q.** And you would agree with me that's pretty
17 nonspecific? You could die of a toxicity present
18 in a sweat lodge; correct?

19 **A. Yes.**

20 **Q.** So it doesn't really tell you this
21 absolutely is hyperthermia; correct?

22 **A. That's correct.**

23 **Q.** That she's found unresponsive was the
24 second fact that you relied on; correct?

25 **A. Yes.**

1 Q. And that fact is also nonspecific;
 2 correct?
 3 A. Yes.
 4 Q. Meaning she could be unresponsive inside
 5 a sweat lodge because of a toxicity or a toxin
 6 that's present; correct?
 7 A. Correct.
 8 Q. So it doesn't absolutely tell you this is
 9 hyperthermia?
 10 A. Correct.
 11 Q. The fact that no other pathology means
 12 that you just ruled out other causes during your
 13 autopsy; correct?
 14 A. Correct.
 15 Q. Meaning no trauma; correct?
 16 A. Right.
 17 Q. And that also is not specific?
 18 A. Correct.
 19 Q. All right. And that those three facts is
 20 what formed 99.8752 percent or substantially the
 21 basis of your conclusion; correct?
 22 A. Yes.
 23 Q. Now, you had a difference of opinion with
 24 Dr. Lyon regarding his calling it "heat stroke";
 25 correct?

1 A. Correct.
 2 Q. And this difference of opinion that you
 3 had with him was discussed at a meeting with the
 4 prosecutors and the detective on December 14, 2009;
 5 correct?
 6 A. Yes.
 7 Q. Now, Dr. Lyon testified he knew he had
 8 this difference with you before going in the
 9 meeting. Is that true for you too?
 10 A. I don't recall if I knew. I'm not sure.
 11 Q. Okay. Is it possible that you knew?
 12 A. Yes. It's certainly possible that I knew
 13 how he was planning to call it just because I
 14 worked with him for a long time, and I kind of know
 15 how he signs things.
 16 Q. Okay. So going into this meeting, you
 17 understood one of the purposes was to discuss the
 18 cause of death; correct?
 19 A. Yes.
 20 Q. And one of the purposes was to discuss
 21 the difference of opinion that the two medical
 22 examiners in this case had about what to call the
 23 cause of death; correct?
 24 A. Yes.
 25 Q. Present at that meeting was Ms. Polk;

1 correct?
 2 A. I think so.
 3 Q. You participated by phone; is that right?
 4 A. That's correct.
 5 Q. You believe Ms. Polk was there?
 6 A. Yes.
 7 Q. You believe Mr. Hughes was there?
 8 A. Yes.
 9 Q. And Detective Diskin?
 10 A. Yes.
 11 Q. Detective Diskin did a lot of talking at
 12 that meeting; correct?
 13 A. I don't know. I'm not sure -- some of
 14 the time I wasn't sure who was talking. I don't
 15 think I ever met Detective Diskin personally or
 16 recognized his voice.
 17 Q. Okay. There were a lot of people -- a
 18 lot of people at this meeting -- correct? -- to
 19 your knowledge?
 20 A. Yes.
 21 Q. Dr. Czarnecki, also from your office, was
 22 present?
 23 A. That's true. Yes.
 24 Q. And Dr. Mark Fischione was also present;
 25 correct?

1 A. Yes.
 2 Q. Now, Dr. Fischione, according to what you
 3 knew -- let me make sure I have the exact words.
 4 Dr. Fischione wanted this meeting so that everyone
 5 could come up with the same cause and manner of
 6 death; correct?
 7 A. Well, I think that he would have
 8 preferred that we all had the same cause and manner
 9 of death to avoid, well, disputing with each other
 10 or -- I'm not really sure why actually. I think
 11 that seems like a reasonable conclusion, to avoid
 12 disputes between ourselves.
 13 Q. Or with others?
 14 A. Well, actually, it really wasn't done
 15 with what other people would decide from ourselves.
 16 I mean, I didn't think about that when I did it.
 17 Q. Sure. Did you state that Dr. Fischione
 18 had the idea that it would be nice if we all came
 19 up with the same cause and manner of death? I
 20 think that's what he was looking for? He thought
 21 it would look better if we were all on the same
 22 page?
 23 A. Yes.
 24 Q. That's what you understood of one of the
 25 purposes for this meeting; correct?

1 A. Yes.
 2 Q. Dr. Fischione, who you understand, works
 3 with Dr. Lyon; correct --
 4 A. Yes.
 5 Q. -- wanted the medical examiners to
 6 discuss cause of death; correct?
 7 A. Uh-huh.
 8 Q. Is that yes?
 9 A. Yes. I'm sorry.
 10 Q. To come up with the same cause of death
 11 so that it looked good, that you were all on the
 12 same page; correct?
 13 A. Yes.
 14 Q. Normally you do your job independently;
 15 correct?
 16 A. Yes.
 17 Q. Without the influence of others; correct?
 18 A. Well, I'm sorry. I rely on the influence
 19 of others. I rely on their investigations. I rely
 20 on information provided to me by others. So to say
 21 I don't or that I do my job without reliance on
 22 others is not correct.
 23 Q. Okay. You knew going into this meeting
 24 that there was a difference between Dr. Lyon;
 25 correct?

1 A. Sure. Okay.
 2 Q. And Dr. Lyon wanted to work out that
 3 difference so that you could all be on the same
 4 page; correct? I'm sorry. Dr. Fischione?
 5 A. I think so. Yes.
 6 Q. Now, Dr. Lyon believed it was a case of
 7 heat stroke, and you disagreed; correct?
 8 A. Well, no. I didn't disagree. It's
 9 almost purely semantic. And what I was willing to
 10 assume -- I think it is heat stroke. But I chose
 11 not to call it that because, as I explained before,
 12 I don't have the clinical findings that the
 13 clinicians rely on and Dr. Paul and Dr. Lyon also
 14 relied on in making that diagnosis.
 15 What was the core temperature? A core
 16 temperature is a component of establishing the
 17 diagnosis of heat stroke.
 18 Q. Okay. So I understand you're telling the
 19 jury that the difference between you and Dr. Lyon
 20 was one of terminology.
 21 THE COURT: Ms. Do, I'm sorry. There is a
 22 distraction.
 23 MS. DO: Sure.
 24 THE COURT: Thank you, Ms. Do.
 25 Q. BY MS. DO: I understand what you're

1 telling the jury, that the difference you had with
 2 Dr. Lyon was one of semantics?
 3 A. Yes.
 4 Q. Meaning of language?
 5 A. Partly that and partly how comfortable we
 6 are with certain assumptions about -- I mean, so
 7 without a rectal temperature that meets the
 8 criteria for heat stroke, I think you probably are
 9 accurate in assuming it met that criteria, and that
 10 they most likely did have the features of heat
 11 stroke that are required to make a diagnosis of
 12 heat stroke. But those are clinical findings that
 13 people don't exhibit necessarily. They might, but
 14 they often do not.
 15 Q. I understand. Sometimes in a case of
 16 heat stroke, for example, you've discussed and
 17 Dr. Lyon has discussed it, it would be a case, for
 18 example, you find a body in the desert; correct?
 19 A. Yes.
 20 Q. And sometimes it's skeletonized; correct?
 21 A. Correct.
 22 Q. Sometimes it's not. And based upon the
 23 circumstances there, ruling out other causes, you
 24 could see that's heat stroke; correct?
 25 A. Yes.

1 Q. But you -- because discovery of the body
 2 is some days later, no one has had a chance to take
 3 a recorded temperature?
 4 A. That's correct.
 5 Q. All right. But in this case, we had EMS
 6 arrive to the scene; correct?
 7 A. Yes.
 8 Q. And Ms. Neuman was taken to the hospital
 9 and passed on the 17th of October 2009; correct?
 10 A. That's correct.
 11 Q. So let me make sure the jury understands
 12 what your definition of "heat stroke" is. You had
 13 previously told us that heat stroke has very
 14 rigorous criteria; correct?
 15 A. Yes.
 16 Q. And one of them is a core temperature of
 17 106 to 107 degrees Fahrenheit; correct?
 18 A. That's what I said. But I believe that's
 19 incorrect.
 20 Q. On one occasion you believe that to find
 21 somebody deceased of heat stroke, there should be a
 22 recorded temperature of 106 to 107 -- is that
 23 right? -- at one time?
 24 A. At one time. Thank you.
 25 Q. Yesterday I thought you said it was 108.

1 Do you recall that?
 2 **A. I do.**
 3 **Q.** And then now what is it?
 4 **A. I believe it's 104 degrees Fahrenheit.**
 5 **Q.** Is it dropped because of something that
 6 you've recently learned?
 7 **A. Recently remembered. When I do have a**
 8 **rectal temperature, it's typically maxed out at 108**
 9 **degrees. That's probably why I thought it was that**
 10 **high. I mean -- but the criteria are -- the**
 11 **clinical criteria, I believe, has it at 104 degrees**
 12 **Fahrenheit.**
 13 **Q.** Just so the jury understands, you had
 14 three different measurements at one time or
 15 another?
 16 **A. Yeah. Sure.**
 17 **Q.** The second thing that you would explain
 18 as being one of the rigorous criteria of heat
 19 stroke was skin changes.
 20 Do you remember that?
 21 **A. Yes.**
 22 **Q.** You described the skin changes as being
 23 tenting. Do you remember that?
 24 **A. Yes. Well, that's one of the things I**
 25 **look for. But the clinicians have a different**

1 **criteria, which, I believe, it's hot and dry skin**
 2 **as a parameter to diagnose heat stroke.**
 3 **Q.** Okay. But I want to stick to your
 4 definition. Is it tenting?
 5 **A. No.**
 6 **Q.** You previously told me it was tenting;
 7 right?
 8 **A. I'm not sure what I previously told you.**
 9 **Q.** Do you want to review your transcript?
 10 **A. Sure.**
 11 **Q.** Let's take a look at 683, which is our
 12 transcript of May 21, page 19, line 21.
 13 What was the page that I gave you,
 14 Doctor?
 15 **A. 19.**
 16 **Q.** Let's look at line 21. This is where I
 17 asked you, what is your criteria as a forensic
 18 pathologist to assign heat stroke?
 19 And your answer at line 21 one was?
 20 **A. Sure. Okay. So let me just -- as**
 21 **clinician you can make three circles here. One,**
 22 **two and, three, or whatever -- how you want to do**
 23 **this. No. 1, is there a core temperature of 42**
 24 **degrees Centigrade, which is 107.6 degrees**
 25 **Fahrenheit -- sorry -- 107.6 degrees Fahrenheit.**

1 **Q.** And then at line 28, I asked you, what
 2 else?
 3 **A. What else?**
 4 **Q.** Let me see if I can do this, Doctor. I
 5 asked you on that date, what are the criteria you
 6 as a forensic pathologist would expect to find to
 7 find heat stroke as cause of death?
 8 And you gave me three things. You said,
 9 core temperature of 106 to 107; correct?
 10 **A. 106 or 107.**
 11 **Q.** And then you told me, skin changes;
 12 correct?
 13 **A. Skin changes.**
 14 MR. HUGHES: Objection. Pursuant to Rule 106,
 15 I'd ask that what he said, he said he wasn't sure
 16 if it was 106 or 107.
 17 THE COURT: Yes. The transcript should be
 18 recited completely.
 19 MS. DO: Sure, Your Honor.
 20 **Q.** What you said here was, No. 1, there is a
 21 core temperature of 42 degrees, and I'm not sure if
 22 that's 106.
 23 I said, can you repeat that?
 24 Mr. Li jumps in.
 25 And you said, that 42 Centigrade or

1 Celsius, not sure if that's 106 or 107 degrees
 2 Fahrenheit.
 3 So what you were saying is you weren't
 4 whether 42 degrees Celsius translated to 106 or
 5 107; correct?
 6 **A. Correct.**
 7 **Q.** So I'll just put here 42 degrees Celsius,
 8 which is either 106 or 107 degrees Fahrenheit;
 9 correct?
 10 **A. Correct.**
 11 **Q.** You then told me skin changes, which
 12 include hot, clammy, red and tenting; correct?
 13 **A. Hot, clammy, red, tenting.**
 14 **Q.** And the tenting, you said, was evidence
 15 of what?
 16 **A. Dehydration.**
 17 **Q.** And the third thing you told me that you
 18 would expect to find as a forensic pathologist to
 19 assign heat stroke was altered mental status;
 20 correct?
 21 **A. Yes. If I could just add something here.**
 22 **You asked, what's tenting? And I said I'm not even**
 23 **sure that's a criteria. It's more suggestive of**
 24 **dehydration, meaning I wasn't sure if tenting is**
 25 **among the criteria for heat stroke. It's just --**

- 1 **it suggests dehydration.**
- 2 **Q.** And I understand that. As part of the
- 3 skin changes, you said you would look for tenting;
- 4 correct?
- 5 **A. Yes.**
- 6 **Q.** Tenting would suggest to you dehydration;
- 7 correct?
- 8 **A. Yes.**
- 9 **Q.** In addition to the skin changes, you
- 10 could also look at vitreous fluid for dehydration;
- 11 correct?
- 12 **A. Yes.**
- 13 **Q.** You could also look at chemistry that are
- 14 done, for example, on Ms. Neuman for electrolyte
- 15 disturbances; correct?
- 16 **A. Correct.**
- 17 **Q.** And in this case, all three of the
- 18 decedents, to your knowledge, did not have a
- 19 recorded temperature of any of those -- 104, 106,
- 20 107 or 108; correct?
- 21 **A. Correct.**
- 22 **Q.** And so you're making an assumption they
- 23 had at one point; correct?
- 24 **A. Well, yes. I am.**
- 25 **Q.** You're making an assumption?

- 1 **A. That's correct.**
- 2 **Q.** And that assumption is based upon just
- 3 the mere fact that there was a sweat lodge;
- 4 correct?
- 5 **A. Not only that, but that the witnesses who**
- 6 **were there said that it was, well, essentially**
- 7 **very, very hot.**
- 8 **Q.** Correct. You were making an assumption
- 9 that the three decedents had the requisite core
- 10 temperature for heat stroke or even hyperthermia
- 11 based upon the fact it was a hot, heated
- 12 environment; correct?
- 13 **A. Yes. Hyperthermia has a lower number to**
- 14 **call "hyperthermia." You could have pneumonia and**
- 15 **be -- well -- and have the same temperature. But**
- 16 **it's the circumstances that make it hyperthermia**
- 17 **due to -- well, due to something aside from**
- 18 **environmental exposure.**
- 19 **Q.** Okay. What I'm asking you, Doctor, is
- 20 you don't have any objective, hard evidence that
- 21 any of these decedents were at 104, 106, 107 or
- 22 108; correct?
- 23 **A. That's correct.**
- 24 **Q.** You are making an assumption that they
- 25 did based only on the fact that there was a hot

- 1 environment; correct?
- 2 **A. Correct.**
- 3 **Q.** And that hot environment could also be
- 4 indicative of a lot of other things; correct?
- 5 **A. The hot environment could indicate many**
- 6 **other things.**
- 7 **Q.** Let me ask you this question.
- 8 **A. Sure.**
- 9 **Q.** Do you know whether or not toxins -- the
- 10 absorption rate of toxins are sped up because of
- 11 heat?
- 12 **A. The absorption rates are influenced by**
- 13 **heat. Sure.**
- 14 **Q.** Do you know that? I don't want you to
- 15 guess.
- 16 **A. Well, I don't know.**
- 17 **Q.** So you're not sure whether or not a
- 18 heated, humid environment is the perfect
- 19 environment to speed up toxins?
- 20 **A. Inhale toxins?**
- 21 **Q.** It could be inhaled. It could be
- 22 aerosolized. It could be in the soil. It could be
- 23 through dermal absorption. I have no idea.
- 24 What I'm asking you is, if toxins are
- 25 present in a hot, humid environment, do you know

- 1 whether or not that speeds up absorption rates?
- 2 **A. I would expect that they would.**
- 3 **Q.** Okay. So there could be other
- 4 assumptions made about the heat; correct?
- 5 **A. Yes.**
- 6 **Q.** The skin changes that you talked about,
- 7 the tenting evidence of dehydration. Again, in
- 8 this case, no evidence of dehydration in any of the
- 9 decedents; correct?
- 10 **A. That's correct.**
- 11 **Q.** And you are, again, making an assumption
- 12 based upon the fact that there was a sweat lodge
- 13 that they might have been dehydrated; correct?
- 14 **A. I don't know if I ever assumed that they**
- 15 **were dehydrated. I don't think I did.**
- 16 **Q.** Fair to say that that should not be an
- 17 assumption made in this case?
- 18 **A. I think so. I think that's true.**
- 19 **Q.** Because the evidence shows that they were
- 20 not at the time of death -- Mr. Brown and
- 21 Ms. Shore; correct?
- 22 **A. That's correct.**
- 23 **Q.** Now, altered mental status, another
- 24 criteria for heat stroke. That also could be in
- 25 indicative of something else; correct?

1 A. Yes.
 2 Q. Which we've already talked about
 3 toxicity; correct?
 4 A. Toxicity. Yes.
 5 Q. Now, your difference of opinion with
 6 Dr. Lyon was because there was no objective medical
 7 data for any of this. You could make the
 8 assumption and call it heat stroke; correct?
 9 A. Yes.
 10 Q. But you were willing to make an
 11 assumption from just the reported circumstances
 12 that there was a sweat lodge that these folks died
 13 of hyperthermia; correct?
 14 A. Yes.
 15 Q. Since you're relying almost exclusively
 16 on the circumstances, you would agree with me that
 17 it is very important that you receive all relevant
 18 information from the detectives from the scene;
 19 correct?
 20 A. Yes.
 21 Q. Meaning if there is evidence at the scene
 22 of any other potential causes, you would want to
 23 know?
 24 A. Absolutely.
 25 Q. You would need to know?

110

1 A. Yes.
 2 Q. And it would be your prerogative as the
 3 medical examiner determining the cause of death in
 4 this case to get that information; correct?
 5 A. Correct.
 6 Q. Now, I want to talk to you about the
 7 information that you've received. Did
 8 Detective Diskin ever tell you that on
 9 October 9, 2009, he spoke to a witness at the scene
 10 who indicated that the tarps and the materials used
 11 to cover the sweat lodge may have been stored with
 12 rat poison?
 13 A. I've never heard that.
 14 Q. And, again, we are not -- I am not
 15 suggesting that anyone ingested -- I don't think
 16 we've used that word in this trial -- that anyone
 17 ingested rat poison or they died of rat poison.
 18 My question to you is this: If that
 19 information was received by Detective Diskin that
 20 potentially points to another cause of death, you
 21 would have wanted to know; correct?
 22 A. Yes.
 23 Q. And you never were told that?
 24 A. That's correct.
 25 Q. But on March 30, 2011, in this trial,

1 Detective Diskin, or the state, rather, emailed you
 2 information about rat poison; correct?
 3 A. I do believe I got a couple of photos of
 4 boxes, rat poison boxes perhaps.
 5 Q. Showing you exhibits 882 and 883. Have
 6 you seen those photos?
 7 A. Well, I haven't. But it might be because
 8 I didn't open the email.
 9 Q. Okay. But you do know in an email they
 10 sent you photos and information about rat poison;
 11 correct?
 12 A. Yes.
 13 Q. You received this information on
 14 March 30, 2011, by an email from Kathy Durrer;
 15 correct?
 16 A. Yes.
 17 Q. I'm going to show you what's been marked
 18 as Exhibit 999. Does that look to you to be the
 19 email you received on March 30, 2011, indicating
 20 that there are attachments of Just One Bite bar
 21 detail, JPEG photos? Correct?
 22 A. Yes.
 23 Q. Could you tell me what Kathy Durrer told
 24 you to do with these photos by reading that first
 25 paragraph.

112

1 A. Attached are two photos describing a rat
 2 poison that witnesses may say was used at Angel
 3 Valley spiritual retreat center at the time of the
 4 sweat lodge held October 8, 2009. It is
 5 anticipated that the defense may question you
 6 regarding the possibility of exposure to this or
 7 other pesticides by the victims and other
 8 participants in the sweat lodge. I also want to
 9 clarify --
 10 Should I continue?
 11 Q. That's okay. She, Kathy Durrer, you
 12 understand, works for Ms. Polk and Mr. Hughes?
 13 A. Yes.
 14 Q. She forwarded you this information on
 15 March 30 and said that these -- this information
 16 about rat poison -- let me make sure I'm reading
 17 this correctly. Witnesses may say was used on or
 18 at the time of the sweat lodge held on October 8,
 19 2009; correct?
 20 A. Yes.
 21 Q. So I think, then, you did not receive
 22 these photos. Correct?
 23 A. Correct.
 24 Q. This came to you March 30, 2011. But if
 25 Detective Diskin was told by a witness on the 9th

1 about rat poison, you should have known on the 9th;
 2 correct?
 3 **A. Of October 2009?**
 4 **Q.** Yes.
 5 **A. Yes.**
 6 **Q.** Now, did Detective Diskin -- and, again,
 7 Dr. Mosley, I really want to make this clear.
 8 We're not suggesting that rat poison killed any of
 9 these folks. This goes to the quality of your
 10 investigation.
 11 Okay?
 12 **A. Okay.**
 13 **Q.** On October 9, 2009, did Detective Diskin
 14 also tell you that that same witness said the wood
 15 he burned in this sweat lodge ceremony could have
 16 been different from previous?
 17 **A. That sounds very familiar. But I'm not**
 18 **sure who the source of that information was.**
 19 **Q.** Could have been something you read?
 20 **A. Yes.**
 21 **Q.** But it wasn't given to you by
 22 Detective Diskin; correct?
 23 **A. Unless he's the one who mailed me these**
 24 **witness statements.**
 25 **Q.** My question is, on October 9, when

1 Dr. Lyon conducted the autopsies of the other two,
 2 when your investigator and Dr. Czarnecki already
 3 came out to the scene, did Detective Diskin tell
 4 you or anyone in your office that wood might be an
 5 issue?
 6 **A. I don't recall. It doesn't stand out in**
 7 **my mind as being something that was presented to**
 8 **me. Although, I have considered it based on the**
 9 **records, the witness statements I have in front of**
 10 **me.**
 11 **Q.** When did you consider it?
 12 **A. I'm not sure. Probably sometime before I**
 13 **signed the death certificate.**
 14 **Q.** And you're certain of that?
 15 **A. No.**
 16 **Q.** Do you recall me asking you these
 17 questions on May 21, 2010, what all you considered?
 18 **A. I don't, but I believe you did ask that**
 19 **question.**
 20 **Q.** Okay. And the discussion of you looking
 21 at the possibility of wood never came up; correct?
 22 **A. That's correct. That is correct.**
 23 **Q.** Were you aware that on October 29, 2009,
 24 the sheriff's department sent a bunch of evidence,
 25 or samples of evidence, rather, from the scene to

1 the DPS lab in Phoenix?
 2 **A. I was not aware of that.**
 3 **Q.** In this case, when there is testing being
 4 done of evidence of the scene, that's something you
 5 should know about; correct?
 6 **A. Yes.**
 7 **Q.** If Detective Diskin said that he sent
 8 these samples on to DPS to test for the presence of
 9 toxins, that's something you would want to know;
 10 correct?
 11 **A. Yes.**
 12 **Q.** And you were never told that?
 13 **A. I don't recall being told that. And I**
 14 **assume that -- well, I'm sorry. I have nothing to**
 15 **add to that.**
 16 **Q.** I'm going to show you what has been
 17 conditionally admitted as Exhibit 345. It is a
 18 report from a DPS criminalist named Dawn Sy, dated
 19 February 4, 2010. Would you take a look at that
 20 and tell me if you have ever seen that report
 21 before.
 22 **A. I have not reviewed this report.**
 23 **Q.** Prior to me just handing it to you now?
 24 **A. That is correct.**
 25 **Q.** You've never seen it; correct?

1 **A. Yes. But I might say that from some of**
 2 **the titles on the CDs that were sent to me last**
 3 **month, I think this was probably among the things**
 4 **that I was given but I haven't reviewed.**
 5 **Q.** I just want to be clear with the jurors.
 6 Prior to today you have never seen this report from
 7 this criminalist, Dawn Sy; correct?
 8 **A. Correct.**
 9 **Q.** But you do believe that it was recently
 10 sent to you; correct?
 11 **A. Yes.**
 12 **Q.** Do you know when that was sent to you?
 13 **A. In March sometime, I think.**
 14 **Q.** If I told you it was sent to you
 15 April 15, 2011, do you have any reasons to dispute
 16 that?
 17 **A. No.**
 18 **Q.** I'm going to show you an email just so
 19 that you know this and it's not me giving you the
 20 information. Looking at this email, it's from
 21 Kathy Durrer to Dr. Lyon and a Dr. Dickson and
 22 Dr. Mosley dated April 15, 2011; correct?
 23 **A. Yes.**
 24 **Q.** And in the body of this email, it says,
 25 the DPS laboratory scientific examination report;

1 correct?
 2 **A. Yes.**
 3 **Q.** That tells you that that report that
 4 you've never seen before I handed it to you was
 5 emailed to you just on April 15, 2011, by the
 6 state; correct?
 7 **A. Yes.**
 8 **Q.** It's never been provided to you before?
 9 **A. Correct.**
 10 **Q.** That's something that you should have
 11 gotten on the day the state received that report;
 12 correct?
 13 **A. That would have been nice.**
 14 **Q.** And that date is February 4, 2010;
 15 correct?
 16 **A. February 4, 2010.**
 17 **Q.** Now, that's two days after you finish
 18 your report; correct?
 19 **A. Yes.**
 20 **Q.** And while you were working on your
 21 report, wouldn't you have wanted to know from the
 22 detectives or the prosecutor that there were
 23 pending before the DPS criminalist some testing on
 24 evidence samples?
 25 **A. Yes.**

1 **Q.** That report came in two days after you
 2 concluded your report, one day after Mr. Ray was
 3 indicted, but you only got this email to you a few
 4 weeks ago?
 5 **A. Correct.**
 6 **Q.** Do you know what the results are in that
 7 report?
 8 **A. Well, yes. No volatiles were detected in**
 9 **certain items. Trace amounts of 2-ethyl-1-hexonal**
 10 **and 2-ethylenehexyl acetate (sic) were detected in**
 11 **another item and a trace amount of alpha terpineol.**
 12 **Q.** You're not a chemist?
 13 **A. That's correct.**
 14 **Q.** And you're not a toxicologist; correct?
 15 **A. That's also correct.**
 16 **Q.** But if the criminalist testing the
 17 evidence item from the scene had detected anything,
 18 you would have wanted to know; correct?
 19 **A. Yes.**
 20 **Q.** Because the next thing you would have
 21 done is you would have found out what exactly these
 22 chemicals are; correct?
 23 **A. Yes.**
 24 **Q.** 2-ethyl-1-hexonal was detected in an
 25 item, No. 356. I'll represent to you that that's

1 one of these paint cans over here that contains
 2 crosscut sections from the tarps and the blanket
 3 that covered the sweat lodge.
 4 Do you know what 2-ethyl-1-hexonal is?
 5 **A. I do not. No.**
 6 **Q.** Do you know whether or not it is a
 7 chemical that's found in, for example, polymers or
 8 plastics?
 9 **A. I do not know.**
 10 **Q.** Do you also know whether or not if that
 11 is also an inert ingredient used in pesticide?
 12 **A. I did not know that either.**
 13 **Q.** That would be relevant, important
 14 information for you to have had before you signed
 15 out the cause of death; correct?
 16 **A. That and help interpreting these results.**
 17 **I would need a toxicologist to explain to me what**
 18 **the toxic symptoms are of these and to see if they**
 19 **correlate with the symptoms.**
 20 **Q.** These are all questions and answers that
 21 you should have addressed had you been given the
 22 information back at the relevant time; correct?
 23 **A. Yes.**
 24 **Q.** Not now on the stand in front of the
 25 jury?

1 **A. That's correct.**
 2 MS. DO: Your Honor, may we recess for the
 3 break?
 4 THE COURT: Yes. Thank you, Ms. Do.
 5 Ladies and gentlemen, we will take the
 6 noon recess now. Remember the admonition, please.
 7 Return to the jury room by 1:30.
 8 And we will be in recess. Thank you.
 9 (Recess.)
 10 THE COURT: The record will show the presence
 11 of Mr. Ray, the attorneys, the jury. Dr. Mosley
 12 has returned to the stand.
 13 Ms. Do.
 14 MS. DO: Thank you, Your Honor.
 15 **Q.** Good afternoon, Dr. Mosley.
 16 **A. Good afternoon.**
 17 **Q.** Thank you, again, for your patience. I
 18 only have about 5 or 10 more minutes.
 19 Before we took the lunch, we were talking
 20 about this report from a criminalist named Dawn Sy.
 21 It's Exhibit 345. You should have that in front of
 22 you.
 23 **A. Yes.**
 24 **Q.** You had told this jury that you had never
 25 seen it until I handed it to you today; correct?

1 A. Yes.

2 Q. So you have not had an opportunity, then,
3 to conduct any further investigation to determine
4 what 2-ethyl-1-hexonal is; correct?

5 A. That's correct.

6 Q. As you sit here today, you have no idea
7 or information whether or not that that is an inert
8 ingredient found in pesticide?

9 A. I wouldn't know.

10 Q. All right. If you had this information
11 back at the time that you had conducted your
12 investigation or were told -- let me start there.

13 If you had been told that evidence items
14 were sent to DPS for testing, you would have held
15 off on finalizing your report; correct?

16 A. Yes.

17 Q. You would have wanted that information
18 before you reached any conclusions in this case?

19 A. Well, yes. I mean, part of waiting --
20 the reason I didn't sign the death certificate on
21 the day of the autopsy was to see if what else
22 might be discovered that I was unaware of. So --

23 Q. Because you -- as you told this jury
24 yesterday, you had kept your mind open waiting for
25 additional information if any were to come forward;

1 correct?

2 A. Correct.

3 Q. Now, if you were to find out that
4 2-ethyl-1-hexonal is, among other things -- I'm not
5 saying it only is -- but is, among other things, an
6 inert ingredient found in pesticide, that would add
7 to the list of questions that you have today to
8 which you have no answers; correct?

9 A. Yes.

10 Q. You stated already based on reviewing the
11 signs and symptoms in the medical records that you
12 have doubts about your conclusion; correct?

13 A. I do.

14 Q. And now knowing that there is this report
15 of some items that were tested that you never
16 received, that further adds to your doubts, doesn't
17 it?

18 A. Yes.

19 Q. Okay. Now, in the same report that you
20 did not receive, if you look up on the screen
21 there, the criminalist indicated she detected
22 volatiles on all of these items here.

23 Do you have any idea what volatiles are?

24 A. Yes. They're substances which vaporize
25 at a relatively low temperature. Alcohol, acetone.

1 They're chemicals that readily appear in the air.

2 Q. So they're chemicals that go from a solid
3 or liquid to a gas form when heated at certain
4 temperatures; correct?

5 A. I'm sorry. Can you -- just one more time
6 that same question.

7 Q. Is it your understanding that volatiles
8 are certain chemicals that go from a solid or
9 liquid to a gas form when heated at certain
10 temperatures?

11 A. Yes.

12 Q. And in this report that you never
13 received, you do see the criminalist detecting
14 volatiles on each of these evidence items, 305,
15 345, 356, 358, 500, 502, 562 and 564; correct?

16 A. Yes.

17 Q. As you sit here today, you have no idea
18 what kind of volatiles; correct?

19 A. Correct.

20 Q. And that, again, was information that you
21 should have had when you concluded your report?

22 A. Well, yes. I mean, it does open -- I do
23 have questions right now about that. Well, I'd
24 rather resolve them earlier than have them now.

25 Q. Dr. Mosley, you had previously told me in

1 an interview that it was important to you to see
2 what folks, the first responders, were seeing on
3 the ground nine days earlier.

4 Do you recall that statement?

5 A. I don't. But sounds like something I
6 would say.

7 Q. It's something that you would say because
8 it's something that you would believe; correct?

9 A. Yes.

10 Q. You would want to know what the first
11 responders were seeing at the scene; correct?

12 A. Yes.

13 Q. You would want to know what the first
14 responders were thinking at the scene; correct?

15 A. Yes.

16 Q. Have you ever been made aware, even up to
17 this date, by anyone on the state's side that there
18 is a statement made by someone Detective Diskin
19 believed to be a first responder that carbon
20 monoxide possibly mixed in with organophosphates
21 was suspected at the scene?

22 A. I do not recall that. I do recall in the
23 medical records that carbon monoxide was seriously
24 considered. In fact, it was tested for in the
25 hospital.

1 Q. And ruled out; correct?

2 A. Yes.

3 Q. But the statement in which

4 organophosphates was mentioned -- have you heard

5 that?

6 A. **I don't think so.**

7 Q. If that statement was in the state's

8 possession and the state's evidence as of

9 October 8, 2009, and they had found it, that's

10 something you would have wanted to know; correct?

11 A. **Absolutely.**

12 Q. Is it something you would want to hear?

13 A. **If there is evidence of organophosphates**

14 **at the scene, I'd like to know.**

15 Q. Were you aware that folks at the scene --

16 the first responders -- had actually contacted the

17 Arizona Poison Control?

18 A. **I was not aware of that.**

19 Q. No one told you that?

20 A. **No one told me. I'm not sure if it was**

21 **in the records I received, but I have no awareness**

22 **of that.**

23 Q. If that statement about organophosphates

24 was taped, would you want to hear it?

25 A. **Sure.**

1 MS. DO: Your Honor, at this time I'd like to

2 play Exhibit 742 for the doctor.

3 MR. HUGHES: No objection.

4 THE COURT: Okay. You may play that.

5 (Exhibit 742 played.)

6 Q. BY MS. DO: Were you able to hear that,

7 Dr. Mosley?

8 A. **For the most part. Few spots I couldn't**

9 **hear. But I got the gist.**

10 Q. Okay. And I represent to you that was a

11 tape made on October 8, 2009, at Angel Valley at

12 the scene of the accident.

13 A. **Okay.**

14 Q. Again, if that information was discovered

15 in the state's evidence by the state on that night

16 and forwarded to you, it would have changed the

17 direction of your investigation, would it not?

18 A. **You know, because I can't test for**

19 **organophosphates, there is not a lot I can do. If**

20 **they're aware that it's there, then it's up to them**

21 **to find it. If they suspect it's there, it's up to**

22 **the investigative agencies to detect it or to**

23 **exclude it as being there.**

24 **My investigation is -- well, I don't --**

25 **my investigation is limited to the medical records**

1 **and other reports that I receive. There's a lot of**

2 **hearsay, technically speaking.**

3 Q. Sure.

4 A. **I don't have any firsthand analysis of**

5 **any of this, about organophosphates or --**

6 Q. The binder that you have in front of you,

7 the pink binder of witness statements, that you

8 were provided by the state --

9 A. **Yes.**

10 Q. -- that you relied on in part is all

11 hearsay; correct?

12 A. **Yes.**

13 Q. And my question to you, again, is -- I'm

14 not suggesting that you did anything wrong. But if

15 you had all the information made available to you,

16 you would have looked at everything; correct?

17 A. **Yes. At least to consider and to see**

18 **what conclusions I could draw from the evidence I**

19 **have.**

20 Q. Sure. So if on October 8, 2009, the

21 state or the detectives picked up on that statement

22 made by a first responder and forwarded that

23 information either to you or Dr. Lyon, you might

24 have been looking at the medical records the way

25 you're looking at them today?

1 A. **Correct.**

2 Q. You might have looked at the medical

3 records on that day and said the pieces fit

4 together to suggest the possibility of

5 organophosphates; correct?

6 A. **Yes.**

7 Q. And if you had those pieces fit together

8 on the night of the 8th and the night of the 9th,

9 you could have suggested or even requested samples

10 be kept for testing at a future date; correct?

11 A. **Yes.**

12 Q. But none of that can be done today;

13 correct?

14 A. **Correct.**

15 Q. As you sit here today, you can't tell the

16 jury whether or not organophosphates did not

17 contribute to the cause of death of Ms. Neuman;

18 correct?

19 A. **I cannot tell the jury that I'm certain**

20 **organophosphates were not contributory.**

21 Q. And because you have -- Is that okay --

22 do you want to restate that?

23 A. **No.**

24 Q. There might have been a double negative.

25 A. **Yeah.**

1 Q. Let me clear that up. What you're
2 telling this jury is that what you saw was
3 consistent with organophosphates; correct?

4 A. **Well, let me say that there are symptoms
5 that are consistent with organophosphates.**

6 Q. As you sit here today, you have doubts
7 about the conclusion you reached on February 2,
8 2010, insofar as it being a complete conclusion;
9 correct?

10 A. **My conclusion when I sign my report --
11 well, at this point, in retrospect, I think there
12 is more to Liz Neuman's death than purely
13 hyperthermia.**

14 Q. And that something more could have been
15 organophosphate toxicity; correct?

16 A. **The possibility exists that it's
17 organophosphates.**

18 Q. And that's something that we're never
19 going to be able to figure out today because of the
20 time lost; correct?

21 A. **For absolute certainty, no. We won't be
22 able to figure that out.**

23 Q. It remains a possibility?

24 A. **It remains a possibility.**

25 MS. DO: Thank you, Your Honor. I have

1 nothing further.

2 Thank you, Doctor.

3 THE COURT: Thank you, Counsel.

4 Mr. Hughes.

5 MR. HUGHES: Thank you, Your Honor.

6 REDIRECT EXAMINATION

7 BY MR. HUGHES:

8 Q. Doctor, Ms. Do played you a statement a
9 few minutes ago. Do you know who was speaking in
10 that statement?

11 A. **I don't.**

12 Q. Do you know what their thought process
13 was that caused them to utter the words we heard?

14 A. **I don't.**

15 Q. You mentioned the word "hearsay." And I
16 think you said that was the problem with hearsay.
17 The statement, whoever that was, said something
18 about carbon monoxide also; correct?

19 A. **Correct.**

20 Q. And have you had a chance to look at
21 records to determine whether carbon monoxide was a
22 factor in the deaths at the sweat lodge?

23 A. **I have. I have looked for that through
24 the records. And I'm confident that carbon
25 monoxide was not a factor in these deaths.**

1 Q. Is there a specific test that a hospital
2 can do to look for to see if a person's been
3 poisoned by carbon monoxide?

4 A. **Yes.**

5 Q. Did the hospitals run that test?

6 A. **They did.**

7 Q. And do you know whether that test showed
8 that carbon monoxide caused the deaths of the
9 people at the scene?

10 A. **Those tests excluded carbon monoxide as
11 cause of death.**

12 Q. Now, the signs and symptoms that Ms. Do
13 has gone over and that I asked you about
14 yesterday -- some of them are consistent with
15 organophosphates; is that correct?

16 A. **Yes.**

17 Q. Do you know whether Ms. Neuman's doctors
18 at the Flagstaff Medical Center considered the
19 possibility that there would be poisoning of
20 Ms. Neuman by either a cholinergic or
21 anticholinergic substance?

22 A. **They did consider that.**

23 Q. Do you know what Ms. Neuman's doctors --
24 Dr. Cutshall -- what his final diagnosis was in his
25 report after she died?

1 A. **I'm not -- I don't know.**

2 Q. Ms. Do had asked you, I think, some
3 questions about whether there was special
4 cholinesterase, I believe, that could be tested for
5 in the blood to see if there was a cholinergic --

6 A. **Right.**

7 Q. Is that something that would have been
8 available to her doctors at Flagstaff Medical
9 Center?

10 A. **Yes.**

11 Q. And, Doctor, do you have Ms. Neuman's
12 medical records in front of you?

13 A. **Yes.**

14 MR. HUGHES: May I approach the witness?

15 THE COURT: Yes.

16 Q. BY MR. HUGHES: I see you have a stack.
17 Let me, if you don't mind, borrow her records.

18 A. **I'm sorry. I'm not sure that last
19 question was clear. What Mr. Hughes asked me was
20 could they have tested the blood for cholinesterase
21 activity? And that would have implicated
22 organophosphates if the activity of cholinesterase
23 was markedly -- significantly reduced. And they
24 measured it over -- I think you have to measure it
25 overtime because everyone has a different level of**

1 **baseline cholinesterase activity.**

2 **I do believe the clinicians in the**
3 **hospital have the capacity to do that testing.**

4 **Q.** Doctor, showing you Exhibit 366, I'm
5 looking at Bates No. 3018. Do you know whether
6 it's something typical for a doctor when a patient
7 dies in the hospital to prepare a death summary?

8 **A.** **It's not as typical as I'd like, but they**
9 **do on occasion write death summaries.**

10 **Q.** Did you have an opportunity -- prior to
11 preparing your autopsy report, was this one of the
12 records that was available to you in making your
13 determination?

14 **A.** **Most likely. Yes.**

15 **Q.** And do you know whether Dr. Cutshall, at
16 least on October 17, had an opinion in this medical
17 records as to the cause of death?

18 **A.** **Well, yes. He's listed it right there**
19 **under the title "Cause of Death."**

20 **Q.** And let me ask you this: Dr. Cutshall
21 listed three cause of death: Acute renal failure,
22 anoxic brain injury, and then this DIC secondary to
23 heat stroke.

24 Are those findings of cause of death by
25 Dr. Cutshall consistent or inconsistent with the

1 cause of death you listed in the autopsy report?

2 **A.** **They are consistent with the cause of**
3 **death I listed in my autopsy report.**

4 **Q.** Can you explain how it is that they're
5 consistent.

6 **A.** **Well, heat stroke, as clinically**
7 **defined -- and I won't bore you with the details of**
8 **that again -- can cause all the other diagnoses**
9 **listed under cause of death. So you might have**
10 **written it acute renal failure, anoxic brain**
11 **injury, and disseminated intravascular coagulation**
12 **due to heat stroke. I think that could work as a**
13 **mechanistically consistent cause of death.**

14 **He didn't do that. And I have to wonder**
15 **if -- I mean, is he saying that acute renal failure**
16 **happened for some other reason? I don't see that.**
17 **Or anoxic brain injury, basically, a lack of oxygen**
18 **to the brain. All those things can be caused by**
19 **heat stroke.**

20 **Q.** And, Doctor, I believe Ms. Do asked you
21 some questions about what she believes Dr. Paul
22 might testify to if he were to come and testify.

23 **A.** **Yes.**

24 **Q.** And you had an answer that today you
25 would disagree with the opinions that Ms. Do

1 proposed the doctor would say?

2 **A.** **Yes.**

3 **Q.** Can you explain to us what it is that you
4 would disagree about.

5 **A.** **Those other symptoms that those people --**
6 **the people showed -- the miosis, the excess**
7 **salivation. They don't necessarily need to be**
8 **caused by organophosphates. I think it's unlikely.**

9 **I think there is a much more likely**
10 **explanation for that than organophosphates. And**
11 **that would be hypercapnia, which is too much CO2,**
12 **carbon dioxide, in a person's system. And it has**
13 **its own series of symptoms that I think are more**
14 **consistent with the clinical findings than**
15 **organophosphate toxicity would have.**

16 **Q.** And is this hypercapnia the subject of
17 the other differential diagnosis for the cause of
18 death of Ms. Neuman that you discussed in the
19 interview with Ms. Do, Mr. Li and myself back in
20 May of last year?

21 **A.** **In May of last year, I don't remember. I**
22 **might have suggested it. But it was so long ago**
23 **for me. Sorry.**

24 **Q.** Let me see if I can find it.

25 **A.** **I do recall saying something about there**

1 **are changes in -- I would expect air changes, air**
2 **quality changes, that could be potentially life**
3 **threatening. I should probably wait and quote**
4 **myself here.**

5 **Q.** You have a higher opinion of my ability
6 to find things than I do.

7 Let me show you what's marked as
8 Exhibit 683, which is a transcript of your
9 interview back in May 21, 2010.

10 Starting on page 32, Ms. Do asked you
11 about a differential diagnosis. Would you read
12 from there. And I think the point I'm going to ask
13 you about or that I did ask you about is on to the
14 next page.

15 **A.** **I'm sorry. On page 32 which number would**
16 **you like me to start off?**

17 **Q.** How about No. 27, the question, anything
18 else in terms of differential diagnosis?

19 **A.** **My response to that question --**

20 **Q.** Well, I don't -- why don't you give us
21 your response to that question.

22 **A.** **Sort of in the sense of oxygen**
23 **deprivation being so -- suffocation and -- you**
24 **know -- this may have well have occurred. So we're**
25 **all -- the oxygen in the air we breath may seem**

1 like it varies widely from Flagstaff to Phoenix,
2 but it doesn't really. It's always at 21 percent
3 or something like that. But if you drop the oxygen
4 content to where you just say 15 percent, that can
5 kill you if you stay in that room. CO2 goes up.

6 So if the air -- the oxygen content of
7 the air is what's changing substantially or
8 dramatically -- well, then I go on to say, I just
9 contradicted myself there.

10 I was just saying that it doesn't have to
11 change much.

12 A few percent is substantial and
13 important.

14 Q. Is that a question Mr. Li asked you?

15 A. Oh. Yes. Sorry. I had my thumb over
16 his name. Sorry.

17 Q. So the question was, a few percent is
18 substantial and important?

19 And what was your response?

20 A. Yeah.

21 Mr. Li asked, okay. So, good. Go ahead
22 and finish the thought.

23 It brings -- I don't think I said this
24 because whatever this word is, it's not in my
25 vocabulary.

1 Q. What does the transcript say?

2 A. It brings an annulment --

3 Q. And is it possible that was
4 mistranscribed?

5 A. Well, how about this: It brings an
6 element of suffocation, and the cause of death as
7 opposed to pure hyperthermia. But I think in
8 consideration of that, I feel -- I still felt that
9 hyperthermia was the overriding cause of the
10 suffocation element. While it may be present, I
11 have no way to prove it.

12 And Ms. Do asked, and then that oxygen
13 deprivation possibility was discussed and
14 eliminated by all three?

15 And then I say, well, eliminated. I
16 don't know if I can eliminate it. I still can't
17 eliminate because I don't -- I just felt I couldn't
18 prove it. And what -- and what I could prove, I
19 wouldn't feel I could prove, so to speak, with the
20 circumstantial evidence.

21 I am sorry that I speak so unclearly.

22 Q. And, Doctor, can you explain to us, then,
23 how it is or what it is that you believe carbon
24 dioxide might have played a role in Ms. Neuman's
25 death?

1 A. There is something called, well, "carbon
2 dioxide toxicity." Too much carbon dioxide can be
3 toxic to a person. Ms. Do used a pretty good
4 analogy about the Rube Goldberg machine, those
5 complex machines that have all kinds of levers and
6 triggers, and they're just complex.

7 Human physiology is a lot like that.
8 There are thermostats. And the heat gets too high,
9 gets to a certain level in your house, the air
10 conditioning kicks in.

11 Well, if the CO2 level -- you have
12 receptors -- you have a team of receptors in your
13 body that detect CO2 levels. And when those things
14 are triggered, it gets you to inhale more deeply or
15 change your position if you're sleeping. It's --
16 you have internal mechanisms built in to help you
17 survive excess CO2.

18 I'm sorry. I think I lost track of your
19 question.

20 MS. DO: Your Honor, I'm sorry to interrupt,
21 but may we approach?

22 THE COURT: Okay.

23 Dr. Mosley and the jury, please feel free
24 to stand and stretch, if you wish.

25 (Sidebar conference.)

1 MS. DO: Your Honor, I understand that
2 Dr. Mosley discussed this possibility with the
3 defense on May 21, 2010. But the state clearly did
4 not elect to proceed with this theory on causation
5 of death.

6 Ms. Polk made very clear from opening
7 statements it was only heat, heat stroke or
8 hyperthermia. I believe that the state is now
9 proceeding on a new theory for causation of death,
10 or cause of death, rather, prompted by the Haddow
11 report, which is a subject of the Brady violation.

12 I find this whole line of questioning
13 very troubling because it seems to compound the
14 problem that was created by the state's violation
15 of Brady. The defense is now in a position where
16 we are not able to, essentially, meet and defend
17 this theory without going into the issue of the
18 Brady violation.

19 You know -- I would like some time to
20 talk more with my colleagues. But I'm sitting here
21 feeling very troubled by this line of questioning.

22 MR. HUGHES: Your Honor, this is a topic, air
23 quality, was mentioned to the Grand Jury by
24 Detective Diskin. Certainly it wasn't something
25 that when the state began the case that we expected

1 that we'd be honestly arguing causation in this
2 case.

3 The defense -- and they're entitled to
4 keep their cards close to the chest. The defense
5 chose not to bring up this organophosphate issue.
6 They never mentioned it in any of the interviews of
7 the medical examiners. They didn't mention it in
8 the interviews up to the trial.

9 So we had no way until we finally did the
10 interview of Dr. Paul. And he for the first time
11 in his interview mentioned organophosphates. That
12 was the first we'd heard of it. It's not even
13 mentioned in Dr. Paul's report. So we've been
14 scrambling a little bit since then.

15 But it's not inconsistent with the
16 evidence that was presented -- that was presented
17 during the interview of Dr. Mosley. It's something
18 that the defense has brought up a possibility that
19 something called "organophosphates" may have caused
20 the deaths, even though there has been no evidence
21 to this date that organophosphates were used on the
22 property.

23 I think it's appropriate that the state
24 respond and ask what other symptoms could have
25 caused these organophosphates symptoms that the

1 defense has spent a great deal of time in their
2 cross-examination asking Dr. Mosley about.

3 And, again, Dr. Mosley had said even back
4 in May, that he believed that he could not rule out
5 this hypercapnia issue as a cause of death. And
6 it's appropriate that we go into this right now.

7 THE COURT: Anything else, Ms. Do?

8 MS. DO: Your Honor, as the Court knows,
9 U.S. v Marshall, we're not required to tell the
10 state our theories. We have put the state on
11 notice regarding our defense on cause of death as
12 early as May of 2010 at our 15.2 filing.

13 The Court knows we litigated a motion to
14 compel regarding cause of death. It clearly has
15 always been the battleground in this case. The
16 state has had in its possession since October 8
17 evidence and clues of organophosphate toxicity. If
18 the state neglected to see their own evidence,
19 that's not really on the defense.

20 What I'm concerned with now is Mr. Hughes
21 is sort of confirmed is that the state mid trial
22 has now shifted to a different theory that is using
23 information -- it's fruit of the poisonous tree.
24 It's using information gleaned now from the Haddow
25 report, which was a violation of Brady.

1 They're now eliciting testimony from this
2 witness to corroborate that theory. And they're
3 just simply isn't any way for me or the defense to
4 be able to rebut the inculpatory nature of the
5 hypercapnia without going into the rest of
6 Mr. Haddow's report, which the Court knows from
7 reading it is all over the place. It puts us in a
8 very precarious position to figure out how to sort
9 this out because of the state's Brady violation.

10 THE COURT: This was mentioned and discussed
11 in the May interview. There has been a lot of
12 cross-examination regarding organophosphates and
13 differential diagnoses. This was information that
14 was out there. And the state can -- this is a
15 legitimate redirect.

16 So if there is an objection -- I guess it
17 relates to the Brady -- it's overruled. This is
18 legitimate.

19 (End of sidebar conference.)

20 THE COURT: Mr. Hughes, when you're ready.

21 Q. BY MR. HUGHES: Doctor, can you tell us,
22 then, what it is about this hypercapnia that causes
23 you to have a difference of opinion with what
24 Dr. Paul may testify about?

25 A. Well, for one thing, the probability of

1 it existing, I think, is substantially greater than
2 the probability of organophosphates --
3 organophosphate pesticides existing in this
4 situation.

5 I have a good reason based on the
6 statements of multiple witnesses about the quality
7 of the air in that environment. And it describes
8 the situation in which I would expect the level of
9 CO2 to rise substantially.

10 Q. And those statements, are you referring
11 to participants who were inside the sweat lodge?

12 A. Yes.

13 Q. The symptoms, and we talked a little
14 about these yesterday, that are on that list -- are
15 those symptoms or any of them symptoms that you
16 would expect to see, then, with a person who had
17 been exposed to carbon dioxide?

18 A. Well, miosis, for one -- it's pretty well
19 documented, I think, that hypercapnia can show
20 miosis -- well, lacrimation in urination.
21 Diaphoresis, sweating. Well, that's not a very
22 specific finding at all. People are in a sweat
23 lodge or -- well, you step outside in Prescott on a
24 day like today, and you're going to have some
25 diaphoresis, sweating. But it can also be caused

1 **by organophosphates or, alternatively, and I think**
2 **more likely, carbon dioxide.**

3 **Q.** And the diaphoresis. I think, when
4 Ms. Do was cross-examining you, she added that to
5 the list. The "D" in the SLUDGEM mnemonic could
6 also stand for diaphoresis. Would you agree with
7 that?

8 **A. Yes.**

9 **Q.** What -- can you tell us again what that
10 mnemonic is meant to do. Why was -- why does it
11 exist?

12 **A. To help ER doctors; MD, or doctors,**
13 **recognize it as a syndrome. You might not suspect**
14 **it unless you -- and the quicker you realize it,**
15 **the better off the patient is.**

16 **But this may be a case of organophosphate**
17 **toxicity. You know, a farm worker who should**
18 **have -- if you know someone who is working in a**
19 **field farming, and they suddenly have excessive**
20 **salivation and tearing and urination, diarrhea,**
21 **diaphoresis, and they're vomiting, and there is**
22 **miosis, well, in the case of a farmer, in**
23 **particular, you should suspect organophosphate**
24 **toxicity or pesticide poisoning. It's the**
25 **constellation of the symptoms that should trigger a**

1 **doctor treating a patient to think about that.**

2 **Q.** And, Doctor, do you -- as far as on that
3 list, I think you had testified on direct that you
4 couldn't recall one way or the other if there was
5 indication of excessive salivation or frothy sputum
6 in Ms. Neuman's medical records.

7 Do you have any recollection one way or
8 the other?

9 **A. I can't put my finger on it right now.**

10 **Q.** And I'd asked you to look in the Guardian
11 Air records, and you didn't find any mention. Is
12 that something you would expect would be noted in
13 the emergency department records?

14 **A. Yes.**

15 **Q.** So I'm going to show you what's admitted
16 as Exhibit 366, Bates Nos. 3014, 3015. These are
17 emergency department records from October 8, about
18 10:25 p.m., as a result date.

19 Can you tell us, is that the record on
20 these pages that you would expect to see that sort
21 of thing noted?

22 **A. Yes. I don't see any mention of it.**

23 **Q.** Let me ask you about some of the other
24 indications on here. You have lacrimation. Can
25 you tell us, again, what lacrimation would be.

1 **A. Tearing.**

2 **Q.** Do you know whether the emergency
3 department record has any indication of whether
4 there was tearing or not?

5 **A. I don't believe they --**

6 **Q.** Let me ask you. On page 31, 3014, it
7 indicates she appears to be dry with red eyes and
8 was tachycardic. Do you know what the reference to
9 dry with red eyes would mean?

10 **A. Well, if her eyes are dry, then she's**
11 **probably not -- she probably doesn't have**
12 **lacrimation.**

13 **Q.** And then you did add at Ms. Do's
14 request -- or she added diaphoresis. Do you know
15 whether diaphoresis was even observed in
16 Ms. Neuman?

17 **A. I don't recall. I don't think it was.**

18 **Q.** And showing you on page 3015, under the
19 observation for skin, do you know whether
20 diaphoresis was noted in the emergency department
21 that night?

22 **A. Well, it specifically says that it was**
23 **not present. No diaphoresis, no significant --**
24 **well -- I'm sorry, Counselor. What's the Bates**
25 **stamp on that?**

1 **Q.** That's number -- this is No. 3015.

2 **A. If I could ask that you find Bates stamp**
3 **page 2084. It's one that Ms. Do brought up**
4 **earlier.**

5 **Q.** Okay. Are you sure about the Bates
6 number?

7 **A. Well, since you're asking the question,**
8 **no. But I wrote it down twice. 2084. Could it be**
9 **3084?**

10 **Q.** Could it be 2684?

11 **A. I guess I can't read my own handwriting.**

12 **Q.** You may be right, Doctor. We'll figure
13 it out.

14 Let me ask you. This is 2684. Is this
15 the page you're looking for?

16 **A. No.**

17 **Q.** Did you want to see Sidney Spencer's
18 record?

19 **A. Oh. Yes.**

20 **Q.** Let me see if I can find that. Doctor,
21 let me see if you may have that exhibit. 222,
22 Sidney Spencer.

23 I'm sorry. What number did you say?

24 **A. 2084. Okay. This is Mr. Spencer. It**
25 **says, doctor writing about his differential**

1 **diagnosis at the time. So he's -- toxicity**
 2 **secondary to carbon monoxide. I'm just going to**
 3 **read this if that's okay.**

4 **Q.** Has that helped you to answer the
 5 question?

6 **A. I think so.**

7 **Q.** Okay.

8 **A. This is certainly considered -- we'll get**
 9 **a carbon monoxide level. We'll get a venous blood**
 10 **gas --**

11 THE REPORTER: Sorry. Could you -- we'll get
 12 a carbon dioxide?

13 THE WITNESS: We'll get a carbon monoxide
 14 level, a venous blood gas and continue with
 15 100 percent oxygen.

16 Just to summarize this, No. 2 is possible
 17 opiate overdose. No. 3, other metabolic
 18 disturbances. No. 4, additional considerations
 19 would be other sedative hypnotic intoxication.

20 So there is a pretty wide differential
 21 they have there. But at the bottom -- and this
 22 is -- I think Ms. Do had me read this --
 23 considerations also regarding the possibility of
 24 cholinergic overdose with her relatively miotic
 25 pupils. She is not showing any evidence of any

1 defecation. She had no excessive salivation.
 2 She's had no bradycardia.

3 So, clinically speaking, he's identified
 4 three things which makes -- allows him to
 5 clinically which -- well, which lowers the
 6 suspicion of organophosphate toxicity based on the
 7 absence of those three significant clinical
 8 findings.

9 **Q.** And what would be those three significant
 10 clinical findings?

11 **A. Defecation, salivation, and bradycardia.**
 12 **Bradycardia is not on the mnemonic.**

13 **Q.** Is bradycardia a sign or symptom that
 14 would be associated with organophosphate poisoning?

15 **A. Yes.**

16 **Q.** And let me ask you this: Ms. Do had
 17 asked you whether you would agree that in a
 18 mass-casualty incident if you would expect that all
 19 the people who went to the hospital were probably
 20 suffering from the same thing.

21 Do you remember that question?

22 **A. Yes.**

23 **Q.** In the case of Sidney Spencer's records,
 24 you just read that there was no defecation seen?

25 **A. Correct.**

1 **Q.** In the case of Ms. Neuman, her records
 2 indicate that she had lost control of her bowels;
 3 correct?

4 **A. That's correct.**

5 **Q.** If signs and symptoms that are on that
 6 list that we talked about are present for one
 7 person who went to the hospital and not present for
 8 others who went to the hospital, what would that
 9 tell you as far as whether there was
 10 organophosphate poisoning?

11 **A. I would expect in a situation where**
 12 **multiple people are in the same environment, if**
 13 **they're having -- I would expect them to have**
 14 **similar symptoms and to fit the symptoms into the**
 15 **features of the organophosphate toxidrome. Well,**
 16 **it's an imperfect fit.**

17 **Q.** Along that point, on Ms. Spencer's
 18 records, what was the heart rate? Was it a
 19 tachycardia or a bradycardia?

20 **A. Bradycardia.**

21 **Q.** Do you know what Ms. Neuman's heart rate
 22 was observed as early as at the scene by the
 23 paramedics?

24 **A. Tachycardia.**

25 **Q.** Showing you an Exhibit 365, Bates

1 No. 2593, it says, tachycardia. Ms. Do had asked
 2 you whether having high blood pressure or low blood
 3 pressure was something that could be consistent
 4 with heat stroke and also with organophosphates.

5 Do you remember those questions?

6 **A. High blood pressure -- or, I'm sorry.**
 7 **One more time, please.**

8 **Q.** Let me ask it a different way, hopefully
 9 a less convoluted way. Is high blood pressure
 10 associated with exposure to organophosphates, or is
 11 it associated with heat illness such as heat
 12 stroke, or none of the above?

13 **A. None of the above.**

14 **Q.** Okay. What about low blood pressure?

15 **A. Low blood pressure is usually associated**
 16 **with hyperthermia, heat stroke. And I'm not sure**
 17 **if it's associated with organophosphates at all.**

18 **Q.** Do you know whether Ms. Neuman at the
 19 scene had high blood pressure or low blood
 20 pressure?

21 **A. At the scene she had low blood pressure.**

22 **Q.** Can you tell us what the medical term for
 23 low blood pressure is?

24 **A. Hypotension.**

25 **Q.** And then Ms. Do asked you some questions

1 about -- I'm looking at Bates No. 2597, this Verde
2 Valley Fire District field worksheet.

3 Do you remember those questions?

4 **A. Yes. Yes. I remember now.**

5 **Q.** She asked about the pupils. Does this
6 also show what the blood pressure was at various
7 times while Verde Valley Fire Department was at the
8 scene?

9 **A. Yes.**

10 **Q.** Can you tell us what those numbers for
11 blood pressure mean.

12 **A. Well, that -- it's low blood pressure, 80**
13 **over 50, at 5:45. 10 minutes later 88 over 50. At**
14 **6:05 it's 104 over 45. And a little while -- I'm**
15 **sorry. Both readings have the same time marked at**
16 **two entries for 6:05. One says 104 over 45. The**
17 **second says 106 over 55. And the lower number**
18 **is -- well, it's low. And I would expect -- a**
19 **higher number of 80, the systolic pressure of 80,**
20 **that's hypotension.**

21 **Q.** And what is a systolic?

22 **A. Okay. So when your heart beats, you get**
23 **a certain pressure in your blood vessels. That's**
24 **the upper limit. When your heart relaxes, the**
25 **pressure in your blood vessels also relax. So the**

1 **blood pressure is lower.**

2 **The systolic refers to the contraction of**
3 **the heart, the pressure when the heart is in --**
4 **well, when it's contracted. And the lower number**
5 **refers to the pressure when the heart is relaxed,**
6 **the ventricles are relaxed.**

7 **Q.** Do you have any idea why at 5:55 the
8 systolic number would be 88 -- first of all, let me
9 ask. Is 88 -- is that a high or low systolic blood
10 pressure?

11 **A. That's low.**

12 **Q.** And what would a typical systolic blood
13 pressure be for a healthy woman of Ms. Neuman's
14 age?

15 **A. 120 over 75, something like that.**

16 **Q.** And do you have any idea, then, why the
17 systolic went from 88 and jumped up to 104 at 6:05
18 from 5:55?

19 **A. I'm not sure. But I mentioned they've**
20 **started I.V.s. they're pumping fluids into her.**

21 **Q.** Does this indicate at what time the I.V.
22 began?

23 **A. Oh. Yeah. It's right there. At 5:55**
24 **they start an I.V. Yeah.**

25 **Q.** And do you know with that 20, what the

1 "@ sign stands for?

2 **A. It's most likely a rate of infusion.**

3 **Q.** Is that a slow rate or a fast rate of
4 infusion?

5 **A. It's been a while since I've infused**
6 **anybody. I'm not sure. The thing to do would be**
7 **to infuse at a fast rate. Wide open, I think,**
8 **would be another way of notating that.**

9 **Q.** If you had a patient who had a blood
10 pressure of 80 over 50, would you consider whether
11 or not that patient was in shock at that point in
12 time?

13 **A. Yes.**

14 **Q.** And what -- what does blood pressure tell
15 you about whether a person is in shock or not?

16 **A. Well, it sort of defines shock. If you**
17 **have no -- if your blood pressure is acutely**
18 **dropping or been -- there is a shock to the system**
19 **by -- because of the lack of blood flow to vital**
20 **organs.**

21 **Q.** If you had a patient who was at 80 over
22 50, what's the -- assuming you have a medical kit
23 available or an ambulance available, what's the
24 first significant treatment you would provide that
25 patient to try to get them to a safe level?

1 **A. Fluids.**

2 **Q.** And how would you give them fluids?

3 **A. I.V. access, possibly even an intra into**
4 **the bone. You can put a line into a person's tibia**
5 **and infuse fluids that way. But the idea is to get**
6 **fluids in as soon as you can.**

7 **Q.** Do you know whether EMT's and paramedics
8 are allowed to actually put something into the
9 bone?

10 **A. They are.**

11 **Q.** And then turning to the Guardian Air
12 records for Ms. Neuman, do you know whether they
13 also gave her I.V.s? And I'll just approach and
14 show you Bates Nos. 2594 and 2595. Actually, 2593
15 is the face sheet.

16 Does that indicate whether she received
17 some I.V.s also by Guardian Air?

18 **A. Yes. She did get normal saline at 6:30,**
19 **an I.V. bolus, they called it. Yes.**

20 **Q.** I apologize. You almost need a
21 magnifying glass to read these things.

22 Does the record indicate at what rate
23 that I.V. was infusing into her?

24 **A. It just says, an I.V. bolus. Here's**
25 **another one. Normal saline, 18-gauge, right**

1 **anterior fossa, normal saline at a rate of**

2 **500 millimeters per cc per hour.**

3 **Q.** Turning your attention, Doctor, to the
4 top of Bates No. 2595, does that indicate at what
5 rate the I.V. was infusing at?

6 **A. Yes. I'm going to need to power up my**
7 **bifocals here.**

8 **Q.** Would it be easier if I magnified it up?
9 Because you can look at it on the screen.

10 **A. I.V. of intravenous fluid infusing at a**
11 **wide open rate. That's recorded at 1825 by**
12 **Guardian Air.**

13 **Q.** Did they then attempt to start additional
14 I.V.s?

15 **A. Yes. At 1835 attempt made to start**
16 **second PTV in right hand under aseptic technique**
17 **but unsuccessful. Another attempt made also in the**
18 **same extremity. Unable to advance after initial**
19 **backflush of blood, Accu-Chek done. Okay.**

20 **Q.** Doctor, do you know whether the infusion
21 into a patient by this Verde Valley I.V. and the
22 Guardian Air I.V. -- do you know whether that can
23 affect whether a patient presents at the hospital
24 dehydrated or with some level of hydration?

25 **A. If I understand the question correctly,**

158

1 **does an intravenous infusion of fluid intended to**
2 **hydrate a person affect whether or not they appear**
3 **hydrated or dehydrated when they arrive at the**
4 **hospital?**

5 **Q.** Ms. Do had asked you whether there was
6 signs that Ms. Neuman was dehydrated or not. Do
7 you recall that?

8 **A. Yes.**

9 **Q.** And would the infusion, then, of these
10 I.V.s affect whether or not she was dehydrated?

11 **A. Absolutely.**

12 **Q.** And then do you know whether or not the
13 hospital noted any signs of dehydration for her?

14 **A. They did not.**

15 **Q.** I'm going to show you Exhibit 366, Bates
16 No. 3004. This is a October 15th record from a
17 Dr. Martin.

18 And do you see his history of present
19 illness?

20 **A. Yes.**

21 **Q.** And I'll try --

22 MS. DO: May I have the Bates number, please?

23 MR. HUGHES: Yes. 3004.

24 **Q.** Do you know whether there is at least a
25 consideration or a diagnosis of whether there may

1 have been dehydration?

2 **A. Yes.**

3 **Q.** And based on your recollection of the
4 records, would you have any reason, then, to
5 disagree with this history of present illness by
6 Dr. Martin?

7 **A. None whatsoever.**

8 **Q.** Ms. Do had asked you some questions about
9 whether there was anything in Ms. Sotelo's report
10 that you've now found to be inaccurate.

11 Do you remember those questions?

12 **A. I do.**

13 **Q.** Let me see if I can find her report.

14 **A. I may have a copy here.**

15 **Q.** Does it have an exhibit sticker on the
16 back?

17 **A. If it did, it doesn't anymore.**

18 **Q.** Well, if it got removed, it will be my
19 hide. So let's make sure we find it.

20 Okay. Showing you Exhibit 363. And
21 you've got a copy in front of you of her report?

22 **A. Yes.**

23 **Q.** Okay. Then I'll take Exhibit 363 and
24 Bates stamps 4599.

25 Is this Ms. Sotelo's report that you

160

1 mentioned that you now believe there are some
2 things that are inaccurate in it?

3 **A. Yes.**

4 **Q.** Apparently it's also been marked as a
5 separate document as well, which would be
6 Exhibit 886. Do you recall -- can you tell us what
7 it is that is inaccurate about Ms. Sotelo's report.

8 **A. Well, in retrospect, what I thought was**
9 **inaccurate may actually be accurate.**

10 **Q.** Why don't you tell us what it is you
11 thought was inaccurate, and we'll go from there.

12 **A. Ms. Sotelo wrote, on October 8, 2009,**
13 **this woman was involved in a sweat lodge ceremony.**

14 **Q.** I'm going to zoom in now that I see what
15 part you're talking about. Is it this?

16 **A. Yes.**

17 **Q.** Okay. The section entitled "Background"?

18 **A. Right. So right under the word**
19 **"Background," it says where she became ill from**
20 **heat exhaustion and dehydration. Yesterday I**
21 **couldn't -- I didn't think there was evidence of**
22 **dehydration. And you're just showing me now about**
23 **the -- you know -- still I can't prove chemically**
24 **or with lab tests that she was dehydrated. But**
25 **Ms. Sotelo likely got that out of the medical**

1 **records, some of which you just showed me.**

2 MS. DO: I'm going to object to the answer as
3 calling for speculation and lack of foundation.

4 MR. HUGHES: I'll ask a follow-up question.

5 THE COURT: Mr. Hughes.

6 **Q.** BY MR. HUGHES: Doctor, do you know the
7 sources that Ms. Sotelo, your investigator, would
8 derive the information that's in the background
9 section of her report?

10 **A.** Well, she listed J. Craven, No. 39488,
11 Flagstaff PD, and Sergeant Thomas Boelts of the
12 Yavapai County Sheriff's Office, as being her
13 sources.

14 **Q.** Do you know where the Flagstaff PD
15 officer, the YCSO sergeant, came by information
16 that Flagstaff Medical Center had seen people with
17 heat exhaustion and dehydration?

18 MS. DO: Objection, Your Honor. Foundation.

19 THE COURT: Sustained.

20 **Q.** BY MR. HUGHES: Another question on the
21 same report. Ms. Do asked you whether you knew if
22 this No. 21 became ill and sent to local hospitals.
23 Do you know one way or another if it was actually
24 21 people who went to the hospital?

25 **A.** I don't know. I think it was --

1 **Q.** Could it have been 18?

2 **A.** I've heard that number also as being the
3 number who became ill and sent to local hospitals.

4 **Q.** And then going back to this chart and the
5 hypothesis, if you will, that people from a
6 mass-casualty event who became ill at the same time
7 most likely became ill from the same cause if --

8 Let me ask you this: Have you looked at
9 the medical records of any of the 18 patients who
10 went to the Verde Valley Medical Center?

11 **A.** Yes. Although it's been a while and the
12 details may well have escaped me by now.

13 **Q.** Let me ask you hypothetically. Of the 18
14 people, including the 3 that died, if 14 of them
15 showed no sign of miosis, would that affect your
16 determination of whether organophosphates were
17 likely or not likely?

18 **A.** Yes.

19 **Q.** And can you tell us how that would affect
20 it?

21 **A.** It just seems unusual. Why should three
22 people who were ill, ill enough to go to the
23 hospital, have symptoms or be exposed to
24 organophosphates when the other 14 had no signs or
25 symptoms of organophosphate exposure. So it just

1 makes me suspect that perhaps organophosphates is
2 not the reason they're sick.

3 I'm sorry. Could I just go back to a
4 question you asked a little while before?

5 **Q.** Sure.

6 **A.** You asked me what's inaccurate about this
7 report. It's probably -- I don't doubt that this
8 is exactly how it was reported to Ms. Sotelo. But
9 it says, during the ceremony about 65 people were
10 inside. I've heard it was much fewer than that,
11 maybe 55. It's just something I wanted to get to
12 because it's different from what I thought before.

13 **Q.** Okay. Would you have any reason, then,
14 to change your opinion if, indeed, it was
15 approximately 50 to 55 people in the sweat lodge
16 as opposed to the 65?

17 **A.** No.

18 **Q.** As far as the carbon dioxide causing
19 symptoms that you refer to, can you tell us or
20 explain to us how it is that carbon dioxide can
21 make a person sick.

22 **A.** Well, it can -- the space that's being
23 taken up by carbon dioxide, if it's beyond its
24 normal level, can deprive the body of oxygen or
25 oxygen that it would normally extract from the air.

1 It's also known to be directly toxic in excessive
2 amounts.

3 I believe the toxidrome is from carbon
4 dioxide in this case. Because of symptoms like
5 headaches. A headache is typical of carbon dioxide
6 toxicity. But it's not part of the organophosphate
7 symptomatology.

8 And in the audiotape we heard just a
9 little while ago, nausea, vomiting and headache is
10 what I heard him say. Those are all part of what
11 those people were -- if I'm paraphrasing correctly,
12 all part of what those people were experiencing.

13 I think the headache -- the headaches
14 that multiple people had suggests that carbon
15 dioxide was the toxic -- it implicates a toxin that
16 would produce headaches, like carbon dioxide.

17 I may have diverged from your question,
18 Counsel. I apologize.

19 **Q.** No. I think that appears to have
20 answered. Let me ask you a question. Do you know
21 what something called "Holotropic breathing" is?

22 **A.** Holotropic breathing. I'm not sure. I
23 think I have an idea, but I'll let you define it
24 for me.

25 **Q.** Let me give you a hypothetical, then I'm

1 going to ask you a question. Assuming there is
2 something called "Holotropic breathing" that
3 involves person for a period of time, more than say
4 15 minutes or so, breathing very, very rapidly and
5 very, very shallowly, basically, panting very
6 quickly for maybe 15 to 20 minutes or longer, maybe
7 an hour, to the point that sometimes they pass out,
8 do you have an idea of how that would have an
9 effect on the body?

10 MS. DO: Your Honor, I'm going to object to
11 relevance. The evidence shows that this activity
12 was done days before the sweat lodge.

13 MR. HUGHES: Your Honor, I believe there is
14 some evidence that Ms. Neuman and others were doing
15 Holotropic breathing inside the sweat lodge to
16 sustain the heat.

17 MS. DO: I don't believe -- that
18 mischaracterizes --

19 THE COURT: We have speaking objections and
20 responses going here. Overruled.

21 Again, reminding the jury to assess
22 questions based on the evidence you've actually
23 heard.

24 So you may proceed.

25 Q. BY MR. HUGHES: Doctor, how would a

166

1 prolonged period of time doing that sort of
2 breathing -- what affect would that have on the
3 body?

4 A. I'm not sure.

5 Q. Well, let me ask you this: Could that
6 rapid, shallow breathing affect the body's ability
7 to give off carbon dioxide or get rid of carbon
8 dioxide?

9 A. Again, I'm not sure.

10 Q. We talked a little bit about Ms. Sotelo's
11 report. Can you tell us what the significant facts
12 from the scene are that led you to believe that
13 hyperthermia was the cause of death in this case?

14 A. The significant facts from the scene.
15 Well, it's a sweat lodge. People were sweating
16 because they're hot. And I think that's the
17 intention.

18 And from Ms. Sotelo's report, you're
19 asking the --

20 Q. Well, I'm just wondering -- you pointed
21 out a few things that were inaccurate in the
22 report. And you also told Ms. Do on
23 cross-examination that -- and I believe also on
24 direct that the primary basis of your opinion as to
25 cause of death was the circumstances at the scene?

1 A. Yes.

2 Q. So what are those circumstances at the
3 scene, as you sit here today, that you believe are
4 relevant to cause of death?

5 A. The prolonged exposure to high heat. So
6 the total insult to the body from how hot it was
7 and how long they were exposed to that heat. So
8 that's the primary thing which made me think that
9 heat stroke or hyperthermia would be the -- is the
10 cause of death in this case.

11 Q. And you've mentioned that you now believe
12 that this exposure to carbon dioxide could also
13 explain some of the symptoms that we've seen?

14 A. Yes.

15 Q. Can you tell us what it is about the
16 scene that you're aware of that leads you to
17 believe that there could have been exposure to
18 carbon dioxide.

19 A. Well, some of the witness statements that
20 I have -- it's -- what's described is a sweat lodge
21 where there are areas where no air is circulating,
22 that doors open but some areas don't receive as
23 much fresh air as others. And so areas of stagnant
24 air within the sweat lodge would make me think that
25 the CO2 levels in those areas would rise.

168

1 Q. And those are witness statements from
2 people who are in that lodge from 2009?

3 A. Correct.

4 Q. Is that the reason, then, that you
5 explained in May of 2010 that you could not rule
6 out the carbon dioxide or the suffocation from that
7 as a possible cause of death?

8 MS. DO: Your Honor, may we approach?

9 THE COURT: I'm going to take the afternoon
10 recess right now, ladies and gentlemen. Please
11 return by -- be assembled, say, 20 after. Remember
12 the admonition, please.

13 Dr. Mosley, you're excused at this time
14 for a break. Remember the rule of exclusion
15 applies in this case, as I've stated a few times.

16 The parties remain.

17 Thank you.

18 (Proceedings continued outside presence
19 of jury.)

20 The record will show that the witness and
21 the jury have left the courtroom.

22 Ms. Do.

23 MS. DO: Your Honor, the Court marked
24 yesterday, I believe it was 1007, the email which
25 the state provided Dr. Mosley with the Haddow

1 report on April 15, 2011. While I think -- what
2 I'm troubled by is the language that this witness
3 is now using seems to me almost verbatim from the
4 Haddow report.

5 This witness has never used the term
6 "hypercapnia." On May 21, 2010, we discussed the
7 depletion of oxygen and increase in carbon dioxide.
8 That was the extent of it. He never mentioned the
9 word "hypercapnia." That was introduced in this
10 trial through Mr. Haddow in his report.

11 The witness, Dr. Mosley, has never
12 mentioned stagnant air. He's never mentioned any
13 features about the sweat lodge structure, the air
14 circulation. And I'm going to review my record.
15 But I do not believe that Dr. Mosley was provided
16 with the witness statements at the time that he
17 rendered his report on February 2nd and at the time
18 that I interviewed him on May 21.

19 I'm just really troubled by this. It
20 seems to me that this witness is, essentially,
21 testifying to the contents of the Haddow report.

22 This magnifies the Brady violation. This
23 magnifies the problem that the defense is
24 continuing to deal with. It seems to me that this
25 information is being presented to the jury in an

1 inculpatory fashion.

2 Mr. Kelly limited his cross-examination
3 of Detective Diskin in compliance with the Court's
4 order or his belief in compliance with the Court's
5 order to just the actual suppression and not to the
6 substance of the Haddow opinion or the Haddow
7 report.

8 And the Court knows that the report
9 contains exculpatory information that has not been
10 presented to this jury. The impression that is
11 being given to this jury right now is this doctor
12 is rendering a medical opinion regarding another
13 cause of death that is being attributed to our
14 client.

15 We're just not exactly sure what to do
16 here. It just seems to me this Brady problem that
17 has been on the mind of the Court, that the Court
18 just yesterday said continues to be a concern,
19 continually gets magnified.

20 MR. HUGHES: Your Honor, if I can respond?
21 Yesterday afternoon before, I believe, Ms. Do began
22 her cross, she and I met with Dr. Mosley. And this
23 was after Your Honor made the ruling that
24 Mr. Haddow's report was not to come in.

25 We met with Dr. Mosley. And he's very

1 clear he had not looked at the Haddow report. He
2 hadn't read it. We made it clear to him we're not
3 going to ask about it. There is no connection
4 other than the fact that it's a similar topic
5 between Haddow's report and Dr. Mosley's testimony
6 today.

7 Again, the defense was informed by
8 Dr. Mosley back in May of last year that this issue
9 was a cause of death he couldn't rule out. For
10 whatever reason, the defense -- after he said that,
11 they moved on to other areas. And we put in the
12 record now today what that line of questioning was
13 back in May.

14 Detective Diskin was interviewed in June
15 of 2010 and -- by the defense, and was asked about
16 what other causes of death. And Detective Diskin
17 mentioned in response to a question from Ms. Do,
18 other than in addition to the heat, there are some
19 discussion that the lack of oxygen or carbon
20 dioxide in addition to the heat may have been a
21 factor.

22 And then he goes on, and there is a
23 question. Okay. So with that explanation, is it
24 still your answer that you did not learn anything
25 in your investigation that indicated another

1 possible cause other than heat?

2 And Diskin says, another sole cause other
3 than heat?

4 Ms. Do asks, okay. What are you
5 qualifying that with? Sole. Is there something
6 else?

7 And diskin responds, because -- no.
8 Because carbon dioxide poisoning and hyperthermia
9 could both have contributed.

10 And then Ms. Do says, got it. Other than
11 those two, heat and carbon dioxide, did you learn
12 of anything else to suggest other possible causes?

13 We've also disclosed a report from a
14 Dr. O'Connor, who was retained by -- and this was
15 disclosed very long time ago, long before trial.
16 Report by Dr. O'Connor, who is an expert retained
17 by the plaintiff in some civil cases. And O'Connor
18 talked about hypercapnia and the issue that it
19 could have played into the illnesses that people
20 exhibited.

21 The issue of hypercapnia -- and, again,
22 that word is the medical word for the effect on the
23 body, the suffocation effect, that you have when
24 you are exposed to CO2.

25 This is not a new issue. It's been

1 around since May of last year. The defense had
2 questioned the experts about it. And to say that
3 it is improper to go down this line because
4 Mr. Haddow's report also refers to that is not what
5 the Court ruled, and it's not what we're asking
6 this expert about.

7 Again, I can't emphasize enough, this
8 doctor made clear yesterday he hadn't really looked
9 at anything we had sent other than some of the
10 medical records of Ms. Neuman.

11 And he definitely said, I hadn't looked
12 at Mr. Haddow's report. That was yesterday
13 afternoon Ms. Do and I interviewed him down the
14 hallway.

15 THE COURT: Can I see Ms. Sotelo's
16 investigation report that he's been referring to,
17 please.

18 MR. HUGHES: Your Honor, that's Exhibit 886.

19 THE COURT: Thank you, Mr. Hughes.

20 Ms. Do, you wanted to reply?

21 MS. DO: Yes, Your Honor. Thank you.

22 As I was listening to Mr. Hughes's
23 argument, it seems to me that all of these issues
24 highlight the problem that the Brady violation
25 occurred -- the problem that the Brady violation

1 presents. Had the state produced to us that report
2 on April 29, 2010, when it came into their
3 possession, I would have had that when I
4 interviewed Dr. Mosley on May 21, 2010. I would
5 have had that when I interviewed the detective on
6 June 17, 2010, Your Honor.

7 We had been prevented from exploring the
8 exculpatory nature of that information with
9 critical witnesses. When they discussed the issue
10 of CO2, we would have been able to explore what
11 caused the CO2, i.e., the sweat lodge director,
12 which Mr. Haddow identified, with the airtight
13 sealing of the structure, the offset of the pit in
14 the middle. And we would have explored the
15 possibility of consulting with another expert.

16 But we're in trial. 29 days into trial
17 we get that information. And the state is trying
18 to capitalize on the Brady violation by exploring
19 the second cause of death. And that presents a
20 really difficult problem for the defense not having
21 had that information a year ago.

22 THE COURT: Here's the thing: When I read the
23 pleadings -- here's one thing: I remember even
24 Mr. Barratt had come up on his own, one of the
25 participants. And that interview, I think, was way

1 back, probably in 2009. And so this isn't a secret
2 concept.

3 What the Haddow report did was really
4 incorporate that into something that really could
5 be seen as pointing the finger at another party.
6 And that's the real exculpatory aspect or
7 potentially exculpatory aspect.

8 The CO2 aspect has really been out
9 there --

10 When was Mr. Barratt interviewed
11 approximately? I don't need the exact date.

12 MR. HUGHES: The detective believes it
13 was 2009 that he was interviewed.

14 THE COURT: That transcript was provided to
15 the defense, Ms. Do?

16 MS. DO: It was.

17 THE COURT: Okay. So that -- CO2 has been out
18 there.

19 My concern and the issues more focused,
20 Mr. Hughes, in what you're talking about is this
21 language that's now showing up with Dr. Mosley. I
22 want to look at the report, because I don't think
23 it suggested the idea that air flow and those
24 things and where you're seated -- was he really
25 given that information at the start?

1 MR. HUGHES: Your Honor, I think that
2 explains -- and, again, there is no follow up to
3 his questioning in May of 2010. But the doctor
4 identified in May of 2010 that there were issues of
5 suffocation due to the air quality inside the sweat
6 lodge and the carbon dioxide. There is no follow
7 up.

8 We had his explanation today. There is
9 no reason to believe his explanation then, which is
10 on the same point, would have been any different
11 than it is today had the defense chosen to follow
12 up on that with Dr. Mosley.

13 I would note in Ms. Sotelo's report, I'm
14 referring to on the page where it, basically,
15 starts under information provided by sources.
16 There is a section by Officer Craven. It indicates
17 the decedent, which would be Ms. Neuman, suffered a
18 brain injury due to lack of oxygen, eventually
19 leading to renal and liver failure. Again, that
20 report by Ms. Sotelo was something that was
21 disclosed very early on in this case as well.

22 MS. DO: I think the Court can see from
23 Ms. Sotelo's report there is no mention in there
24 about the construction of the sweat lodge, the flow
25 or lack of flow of air, any of those. And I think

1 the words that are being used by the witness today,
2 essentially, parrot what was found in the Haddow
3 report. And I think the problem we're facing has
4 been magnified because this witness is,
5 essentially, testifying on the heels of
6 Detective Diskin.

7 And yesterday, as the Court recalls,
8 Ms. Polk asked him after the detective, who
9 testified, I believe that the deaths were the
10 result of a combination of heat and carbon dioxide.

11 Ms. Polk: Is that consistent with the
12 information that you learned from the man named
13 Rick Haddow?

14 Answer: Yes.

15 So that coupled with the testimony of
16 this witness, essentially, parroting Haddow's
17 report, essentially, has back-doored in the
18 information this court found was exculpatory and
19 should have been turned over and wasn't.

20 MR. HUGHES: Your Honor, if I can respond on
21 one point?

22 Ms. Sotelo's report does refer to the
23 construction of the sweat lodge. In addition --

24 THE COURT: Whereabouts? That's why I got the
25 report.

1 MR. HUGHES: In the section with information
2 from Sergeant Boelts. It indicate the sweat lodge
3 was crudely made out of various items, such as
4 blankets and plastic tarps with a wood support
5 system. In addition, the witness testified that
6 his investigator and Dr. Czarnecki, another medical
7 examiner in his office, went to the scene on the
8 night of the incident and that he spoke with them
9 and would have gotten information from them. That
10 testimony came in yesterday.

11 So the explanation, the belief that the
12 doctor had in May, saying, I can't rule out this
13 other cause of death, was supported by information
14 that was available. The defense was also aware
15 that Dr. Czarnecki had gone out to the scene and
16 had reviewed things.

17 THE COURT: Well, talking about air flow.
18 It's in the Haddow preliminary report that talks
19 about heat barrier and really gets into air flow
20 issues. And there is just nothing in here that
21 indicated this is what he was looking at.

22 And, again, hypercapnia. That's the
23 medical term. It's first mentioned now -- CO2 --
24 as I sit at the bench here, that's been raised.
25 That was disclosed. That can be discussed. There

1 were a great deal of cross-examination about
2 differential diagnoses and what's being looked at,
3 a great deal of cross-examination about how the
4 various signs might match to either toxicity or
5 what.

6 And -- but, I have to say, Mr. Hughes,
7 the report was sent to Dr. Mosley. He indicates he
8 has not looked at it. That's what you're telling
9 me.

10 MR. HUGHES: That's what he told Ms. Do and
11 myself yesterday. And, your Honor, I would note he
12 hasn't mentioned a radiant heat barrier. What he's
13 mentioned are the things that someone going to the
14 scene would clearly observe, that this is a
15 structure that wouldn't have good air flow because
16 it's covered in a big rubber plastic tarp with
17 other tarps under it.

18 And that he indicated that other
19 participants had mentioned, and they're documented
20 in the police report, there are some areas -- and
21 we heard testimony from some of the participants
22 who have testified in this court. There are some
23 areas where the air seemed better in the sweat
24 lodge and some areas where the air didn't seem as
25 good in the sweat lodge. That's information that,

1 again, is something that even participants were
2 noting very early on disclosing to the police
3 department.

4 It was put in reports. It's not
5 unexpected that Dr. Mosley would have picked up on
6 that. His opinion, I think, is as well or better
7 explained by that than the suggestion that he
8 looked at Haddow's report and saying that he
9 didn't.

10 There is quite a few other things that we
11 sent him -- the covers of rat poison boxes and the
12 medical records for all the participants, things
13 such as that that I'd hope to ask him about. And
14 that's the reason we set up the interview with
15 Ms. Do. And he made clear in our interviews that
16 he's been too busy and hasn't looked at any of that
17 sort of thing.

18 MS. DO: Your Honor, I do recall talking to
19 Dr. Mosley on May 21, 2010, about the sweat lodge
20 structure itself, and that was because he had
21 mentioned to me he had seen photos.

22 And I asked him, did seeing the sweat
23 lodge ceremony influence your opinion or did you
24 reach any kind of conclusions or thoughts about it?

25 And he said, no.

1 All it did was confirm for him that there
2 was a sweat lodge ceremony. He was interviewed
3 again by Mr. Li in January of this year. Again, no
4 mention of the words that the Court is now hearing
5 of hypercapnia, stagnant air, no air circulation.

6 I don't want to question his veracity. I
7 find it very troubling after the Court found a
8 Brady violation, the state went ahead and sent him
9 the report, and now all of a sudden we're hearing
10 these terms that come straight out of Haddow's
11 report.

12 MR. HUGHES: Your Honor, again, this report
13 came to the doctor. And Ms. Do would have the
14 email. We copied her on it either March or April.
15 The doctor had this opinion back in May, nearly a
16 year before he could have had access to the report.

17 The Court never ruled at the time it
18 found this Brady violation that we couldn't provide
19 it to experts. I think it would be unreasonable
20 for the defense, which says the report is
21 exculpatory, to say the state can't now provide
22 exculpatory information to an expert, which the
23 defense is then going to ask about, well, you were
24 never provided with this exculpatory information.

25 THE COURT: Well, it was discussed at the time

1 that these items of evidence or information can be
2 mixed. They can have both aspects to it. It's
3 still a Brady violation if it contains some aspects
4 of exculpatory. But it certainly raised a
5 difficult problem in this case.

6 Mr. Hughes, I'm thinking you're not going
7 to go over this much.

8 MR. HUGHES: I'm not, Your Honor. Really what
9 I -- what I was intending to ask is would the fact
10 that people were sitting in different places --
11 because he's talked about that he heard there was
12 better air and worse air. Could that explain why
13 some people that had miosis, because there were
14 three or four that the medical records documented
15 miosis. Would that explain why 14 that went to the
16 doctor didn't have miosis. That's as far as I was
17 going to go with that. Then I'm going to move on
18 to other areas.

19 THE COURT: With or without that report from
20 Mr. Haddow, that's the kind of question you would
21 be asking this person.

22 And, Ms. Do, as to that specific
23 question, I want any record you want to make on
24 that question, anything in addition.

25 MS. DO: I'll submit on what I've argued, Your

1 Honor.

2 THE COURT: I'm going to permit that question.

3 But -- you know -- really, Mr. Hughes,
4 I'm noting what the defense is saying, and you need
5 to as well with regard to the information now and
6 focusing on the aspects of air flow.

7 MR. HUGHES: I understand.

8 THE COURT: Okay. We need to have a recess.
9 Thank you.

10 (Recess.)

11 THE COURT: The record will show the presence
12 of Mr. Ray and the attorneys.

13 Mr. Li.

14 MR. LI: Thank you, Your Honor. I appreciate
15 you taking the time to do this, Your Honor. I just
16 need to lay a little more record.

17 The question is not so much what
18 questions Mr. Hughes should or should not ask of
19 Dr. Mosley. The question is what effect has this
20 Brady violation had on the defense team's ability
21 to prepare its defense in this particular case.

22 And the problem is it has now become
23 unworkable. Because what has happened is the state
24 through Detective Diskin and through Ms. Polk's
25 questioning were able to elicit, essentially, the

1 substance of the Haddow report. And that's from
2 3/22, two days ago.

3 I know the Court has already heard this.
4 But Ms. Polk asked, is the fact that the deaths
5 were consistent with the combination of heat and
6 CO2 -- Ms. Polk said, is that consistent with the
7 information that you learned from the man named
8 Rick Haddow?

9 And the detective said, yes.

10 That was not a proper question. And then
11 what has happened is Dr. Mosley has, essentially,
12 through questioning by Mr. Hughes, essentially,
13 brought out the exact same points as were in the
14 Haddow report. And the problem is that leads the
15 jury to believe that this has always been the
16 state's position. It hasn't been.

17 The state's position actually has been
18 heat stroke. That's what Ms. Polk said in her
19 opening statement. That's what she said from the
20 beginning.

21 And now we're in a situation where had we
22 been given the information about the Haddow report
23 on time, we would have been able to mount a defense
24 against this new theory that's been sprung in the
25 middle of the trial.

1 And that would have been, as the Court
2 has noted, that this is actually the construction
3 of the lodge and the offset pit and the radiant
4 heat barrier, the rocks and all of the things that
5 Mr. Ray has nothing to do with.

6 Those would have all been explored to
7 demonstrate that actually everything that they're
8 saying implicates another party. And the Haddow
9 report is consistent with that.

10 And the problem is we are now standing
11 here with this jury in the box talking about
12 hypercapnia, all these things, as if this has
13 always been the state's theory, without the defense
14 having been able to have access to the Haddow
15 report, which set out all of the exculpatory
16 reasons why hypercapnia and those things were not
17 Mr. Ray's fault. And that's the unworkable
18 solution.

19 While we appreciate the Court's -- you
20 know -- careful looking at what sort of questions
21 Mr. Hughes can and can't ask, and we assume
22 Mr. Hughes will abide by that, the real question is
23 have we been so prejudiced by the Brady violation
24 and then by the state's purposeful, intentional,
25 eliciting of the substance of the Haddow report

1 through direct -- or through redirect of the
2 Detective Diskin -- have we been so prejudiced that
3 a mistrial is warranted.

4 So I needed to lay that record. And we
5 believe that a mistrial is warranted. We believe
6 it should be granted with prejudice.

7 Thank you, Your Honor.

8 THE COURT: I have to ask at this point,
9 again, Mr. Hughes. What prompted on April 4, I
10 believe it was, the disclosure of the Haddow
11 preliminary report in the email? What prompted
12 that?

13 MR. HUGHES: Your Honor, I believe -- I don't
14 have a copy of the email. But I believe we
15 attached a large number of things to that. The
16 primary prompt was the fact that Dr. Lyon, when he
17 was cross-examined, was asked a lot of questions
18 about things that had not been provided to him,
19 what appeared to be an insinuation like the state
20 was trying to hide this information from Dr. Lyon.

21 We wanted from that point on to make sure
22 all the doctors who would be subject to being
23 examined, and that included this doctor and
24 Dr. Dickson, were provided at least with this
25 information.

1 Again, Ms. Do was asking Dr. Mosley today
2 about things that he had not seen or had not been
3 provided to him even though some of those things
4 were attached to emails that we had provided, we
5 had sent to him. That's one reason.

6 Another reason is at that point in time,
7 we then knew about or consciously knew about this
8 report and were thinking about it along with the
9 other things that were attached to that email. And
10 we wanted to get it to the doctor.

11 And, finally, we did not want any
12 suggestion that we were withholding any
13 information, be it inculpatory or exculpatory, from
14 the medical examiner or from any other doctors, and
15 trying to avoid precisely this sort of line of
16 questioning that occurred today.

17 It was my expectation that the defense
18 would be asking all sorts of questions about
19 Haddow's report, just like I expected they would be
20 asking questions about Dawn Sy's report and about
21 the medical records that were inquired into today,
22 all of those things that the defense believes to be
23 exculpatory. I believe they would be asking the
24 medical examiners those sort of questions.

25 THE COURT: Mr. LI, do you have anything else?

1 MR. LI: I wasn't sure whether -- was the
2 Court's question about why they disclosed it on
3 April 15 to the medical examiners or why they
4 disclosed it to us?

5 THE COURT: Why was it disclosed to you?
6 That's what I was trying to find out. What
7 prompted that? Why was it finally given to the
8 defense? What -- why did that now come to light or
9 at that time three or four week ago? Why then?

10 MR. HUGHES: You mean the report to the
11 defense as opposed to Dr. Mosley?

12 THE COURT: Yes. Yes.

13 MR. HUGHES: I was less involved with that.
14 But my understanding is that there was another
15 request. And obviously the defense had made some
16 requests prior to trial. But there is a request
17 that prompted either Ms. Polk or Ms. Durrer to look
18 in the file and determine whether or not there was
19 anything that had not been disclosed.

20 THE COURT: Is that what happened?

21 MR. LI: Your Honor, my understanding is we
22 made four separate requests in writing.

23 THE COURT: I'm trying to find out why
24 April 4. Because --

25 MR. LI: We don't know why the state --

1 when --

2 THE COURT: Did you do something on
3 March 23rd?

4 MR. LI: No.

5 THE COURT: And then on April 4th, if that's
6 the right date, the report came? Because that's --
7 that's not -- it could be very significant.

8 MR. HUGHES: I think those details were
9 mentioned either in the defendant's brief or in our
10 brief as far as the time line of events. I know we
11 received a letter from the defense. And we
12 responded to that letter with the report that we
13 provided or the email that we provided to the
14 defense.

15 THE COURT: The issue of CO2, as I said,
16 that's just there. People could have explored
17 that. People would know about that, the effort put
18 into the case. You know -- that's not excusing the
19 failure to disclose the Haddow report.

20 But the trial was continued with the idea
21 that you could call Mr. Haddow, you could call an
22 expert in that area to explore that information.
23 That was the approach. I can't -- and now I'm
24 doing the best I can to take the violation into
25 account and allow evidence to go to the jury

1 without it being a prejudice in light of the
2 violation, without it being prejudicial to you, to
3 the defense, in light of the violation.

4 MR. LI: And, Your Honor --

5 THE COURT: And that's the situation.

6 MR. LI: If I may be heard on that last point.
7 Two things. One, it's not a remedy for us to
8 hire -- for the defense to hire the state's expert.
9 There is all kinds of conflict issues in and of
10 itself.

11 But it's not a remedy for the defense to
12 hire the expert that the state wanted to hire and
13 then subsequently has told this court that they
14 wanted to hire again. That's not an adequate
15 remedy.

16 THE COURT: I just suggested that as a
17 possibility. If you felt that it was completely
18 exculpatory, there is the person. And it would be
19 a classic, I would think, if the state had put
20 someone, you know, under wraps, just speaking in
21 general. And here's this person, and now that
22 would be a logical remedy is now, of course, the
23 defense can use the person.

24 MR. LI: Your classic situation that the Court
25 is describing is a lay witness, an eye witness that

1 sees something.

2 THE COURT: Correct. I know.

3 MR. LI: That's not the situation. This is an
4 expert witness who has various opinions and has,
5 frankly, discussed something that, I'll be
6 perfectly honest, eluded this team.

7 THE COURT: You had avowed before that you
8 thought it was a misprint. CO1 versus CO2. Is
9 that correct?

10 MR. LI: That's absolutely correct, Your
11 Honor. We even had a moment in this trial where --
12 I just don't recall which one of us. It was Ms. Do
13 was talking about a medical record and going
14 through it, and it said carbon dioxide or something
15 like that. And she even attempted to correct the
16 witness that it was carbon monoxide.

17 It's not -- the question isn't so much
18 carbon dioxide, per se. It's that the construction
19 of the lodge -- that the state had in its
20 possession over a year ago information that the
21 construction of the lodge that was the sole
22 responsibility, as the Court has heard repeatedly
23 from witnesses -- it was the sole responsibility of
24 the Hamiltons and the people they hired to
25 construct the lodge; that they had information that

1 talking about radiant heat barriers and all of
2 those sorts of things. That's the problem. Not
3 the CO2.

4 But the fact that they had
5 environmental -- you know -- structural issues that
6 contributed to the CO2 poisoning that is the
7 state's new theory about cause of death. That was
8 the Brady violation.

9 And the problem has been compounded, Your
10 Honor. And I have to say this. It has been
11 compounded deeply by the fact that the state
12 purposely elicited from Detective Diskin --

13 THE COURT: The name -- the name Haddow. And
14 you've made that point a number of times. And I'm
15 going to say yes. I can't -- I have a lot of
16 problems with that occurring. Why the state would
17 mention in that fashion the Haddow report.

18 MR. LI: And it's not just the name Haddow,
19 Your Honor. And I apologize for interrupting.
20 It's not just the name Haddow. It's the
21 specific -- you know -- basically, a three-line
22 summary of the Haddow report. I believe that the
23 deaths were a result of a combination of heat and
24 CO2.

25 Question: Is that consistent with

1 information that you learned from the man named
2 Rick Haddow?

3 Yes.

4 So that's, basically, were you given a
5 report by Mr. Haddow?

6 Yes.

7 What did it say?

8 It said that the deaths were the result
9 of a combination of heat and CO2.

10 That's the problem. So then this
11 purposeful eliciting of that particular
12 information, then having a series of questions with
13 this particular witness -- I'm sorry. And then
14 when Mr. Kelly objected -- sorry, Your Honor. When
15 Mr. Kelly attempted to ask Detective Diskin about a
16 number of questions about the Haddow report,
17 Ms. Polk objected strenuously. And you will recall
18 the sidebar.

19 We agreed -- Mr. Kelly agreed to three
20 questions. He asked those three questions. And
21 then on redirect the number of questions that I
22 just described relating to Rick Haddow's report
23 through Detective Diskin occurred.

24 That's the sequence of events. That's
25 very prejudicial because now we've got this

1 witness, essentially, saying the same thing, and so
2 emphasizing the fact that there was this other
3 expert, Rick Haddow, who the detective had
4 consulted when he was forming his beliefs about why
5 the deaths took place and the way they did.

6 Now you've got this medical examiner
7 testifying about hypercapnia and the construction
8 of the lodge and hueing exactly to this reference
9 that Ms. Polk and Detective Diskin -- conversation
10 that they had in front of this jury about,
11 essentially, the Haddow report.

12 All the while we have been prejudiced
13 because this was not disclosed to us until the
14 middle of trial. And that's the problem, Your
15 Honor.

16 The question then becomes, are we beyond
17 the point where there is a sort of -- you know --
18 careful balancing of questioning and interests and
19 all those things that we can actually cure it
20 through some sort of careful -- you know --
21 trigonometry almost. And I don't -- triangulation.
22 I don't think we're there anymore.

23 THE COURT: You said that.

24 MR. LI: Thank you, Your Honor.

25 THE COURT: There is a motion for mistrial

1 under advisement right now. It's under advisement
2 right now. And I don't know if Heidi has mentioned
3 this yet, but we're going to assemble at 8:15.
4 There are other legal issues I'm going to be
5 preparing for.

6 So if there is nothing in writing now, I
7 don't know that there is anything more that can be
8 responded. This constant barrage of pleadings,
9 post -- you know -- the start of trial is just not
10 the way the trial can be conducted. It's not --
11 it's not meant to be conducted in that fashion.

12 But we'll address that. We'll address
13 these things on Tuesday.

14 MR. LI: I appreciate that, Your Honor. I
15 really do. But I want to address the last point
16 about the motions and what have you. I understand
17 the Court's dislike of this constant litigation
18 over issues like this.

19 But on this particular issue that we're
20 dealing with here, we are required to make those
21 motions because of what both the state's
22 questioning of the witnesses and because of the
23 state's decision not to disclose material
24 information and exculpatory information to us. We
25 don't have a choice.

1 THE COURT: These aren't just your motions.
2 I'm talking in general. To have a trial start and
3 then have this barrage of litigation. What I had
4 specifically said months and months and months ago,
5 we're not going to have a trial by surprise. We're
6 going to have a trial that follows the rules.
7 That's all I'm talking about. I certainly was not
8 singling out one side or the other. Just the whole
9 way this trial has end ended up proceeding.

10 So anything else?

11 MR. LI: No, Your Honor. I appreciate you
12 allowing me the opportunity to lay some record.

13 THE COURT: And, Mr. Hughes, anything in
14 reply?

15 MR. HUGHES: Thank you, Your Honor.

16 Briefly, again, the defense has had for a
17 very long time the reports from Dr. O'Connor. And
18 in those reports, he talked about the two -- two of
19 the participants -- Sidney Spencer and
20 Mr. Mehravar -- mentions that the symptoms or the
21 presentation suggests a combination of hypoxia, he
22 says low oxygen and hypercardia, high carbon
23 dioxide, in concentration with a heat injury in a
24 crowded environment most probably contributed to
25 Ms. Spencer's collapse and eventual coma.

1 THE COURT: Mr. Hughes, I interrupted Mr. Li
2 when I thought we were repeating things. You're
3 not addressing -- maybe you're going to get
4 there -- the whole aspect of, well, here is a
5 report that indicates another party could well be
6 at fault. And these people have testified there is
7 even some understanding they had nothing -- you
8 know -- they weren't being looked at as suspects.
9 That's the aspect the defense is really talking
10 about.

11 Yes. CO2 has been out there and talked
12 about, pointed out here a little while ago by one
13 of the participants. Does his own calculation,
14 talked about it in an interview. But the idea of
15 hooking that to the actual structure of the lodge
16 and who might be responsible, that's what's
17 being -- you're not addressing that.

18 MR. HUGHES: I can address that, Your Honor.

19 On December 1, 2009, the defense sent a
20 very long letter to the state, basically, setting
21 forth theories why they believed the defendant
22 should not be prosecuted.

23 In that letter, and I'm referring to page
24 17, there is a section titled "Mr. Ray and JRI did
25 not build the sweat lodge." And it start offs

1 with, Mr. Ray and JRI did not build the sweat
2 lodge. They did not choose to cover it with
3 blankets and plastic tarps. They mentioned that
4 they had no responsibility for obtaining building
5 permits or maintaining it after it was built.

6 On the next page, they mention that
7 Mr. Ray could not -- under existing or under
8 principles governing ordinary negligence, Mr. Ray
9 could not be held liable for any design defect in
10 the sweat lodge or failure to properly store the
11 coverings.

12 As early as December the defense was
13 looking at the sweat lodge and whether Mr. Ray
14 should be held responsible for the decision to
15 cover it with tarps and blankets, or its design,
16 maybe its construction without building permits.
17 That's something that the defense looked at in
18 December.

19 With respect to the issue of air quality
20 inside, the fact that there are some areas towards
21 the back that didn't get very good air and areas
22 towards the front that did, that was discussed in
23 different witness reports that were documented in
24 the YCSO reports.

25 Those areas, Your Honor, I believe --

1 although it's been a while, I can't remember, but I
2 believe Mr. Li even mentioned in his opening
3 statements something along the lines that Mr. Ray
4 didn't build the sweat lodge, didn't have anything
5 to do with building the sweat lodge.

6 It's something the defense has been aware
7 of. And, again, it's a topic that is not new at
8 this point in time.

9 What is new is the expert's opinion and
10 that the sweat lodge wouldn't breath well, which is
11 an expert's opinion as opposed to the participants'
12 opinions. And the expert's opinion that there
13 would be areas in the sweat lodge that had worse
14 environmental conditions than other areas.

15 Again, that's something that was
16 documented by participants, but it was not of the
17 caliber of what an expert would say and would have
18 more weight.

19 The defense has had an opportunity since
20 this Haddow report was disclosed to get their own
21 experts. They still can get an expert to come in
22 and talk about the fact that the way the sweat
23 lodge is constructed does not allow air to flow.
24 To me, that's a common-sense thing.

25 But if they need an expert to argue that,

1 the Court has given them that opportunity if they
2 don't like Mr. Haddow -- to talk about the fact
3 that the sweat lodges, that the air can't easily
4 flow in and out particularly when the door is
5 closed.

6 THE COURT: Dr. Mosley really needs to
7 complete his testimony. And I expect that.

8 I think I indicated yesterday 17 days for
9 trial. I might have overestimated or counted
10 incorrectly, especially in light that at least one
11 juror who has brought up a problem because -- and
12 that juror made that known in voir dire. That's my
13 recollection. And now we're up against that.

14 Thank you.

15 MR. HUGHES: Your Honor, on the scheduling
16 issue, I believe I only have maybe another 20
17 minutes or so with the doctor. We have Dawn Sy
18 here, the criminalist who prepared the report
19 that's been discussed. She is on vacation next
20 week, and there is no way we will finish her today.

21 Ms. Do has informed the state that the
22 defense would prefer that her testimony not be
23 interrupted by another witness because Ms. Sy won't
24 be available next week.

25 The only other person we can try and get

1 here is Detective Barbaro. And I understand the
2 defense wants to raise issue before he's called,
3 which is a long way of saying when I finish with
4 Dr. Mosley, unless the Court will allow us to call
5 Dawn Sy and interrupt her testimony while she's on
6 vacation next week, we don't have another witness
7 to call after the doctor.

8 THE COURT: Ms. Do.

9 MS. DO: Your Honor, if we had an indication
10 that the state was going to rest by the time we
11 start the break, it would be a different issue.
12 But it doesn't seem that way. And so I think that
13 to put Dawn Sy on and defer my cross-examination
14 for three weeks would not be workable for the
15 defense. I am not sure what --

16 MR. HUGHES: Your Honor, I'm not opposing
17 that. I think it -- we asked if they would mind,
18 and they mind. I want to be clear. I'm not
19 opposing the fact that the defense does not want to
20 have her testimony interrupted.

21 It is 4:00 o'clock. And I figure we'll
22 probably be done with Dr. Mosley around 4:30. And
23 I just don't know if the Court -- I wanted to let
24 the Court know that scheduling issue.

25 THE COURT: I expect the trial to be done

1 within the schedule we've announced.

2 Thank you.

3 (Recess.)

4 (Proceedings continued in the presence of
5 jury.)

6 THE COURT: The record will show the presence
7 of Mr. Ray, the attorneys, the jury. And
8 Dr. Mosley is on the stand.

9 Mr. Hughes, here's the exhibit.

10 MR. HUGHES: Thank you.

11 Q. Doctor, you were asked about a time line
12 by Ms. Do. She may have redone it on this page.
13 Do you remember being asked questions about the
14 time line?

15 A. Yes.

16 Q. It indicates there was no conclusion by
17 you on October 19. Had you prepared some
18 preliminary conclusions or did you have an idea as
19 to manner and cause of death on the 19th?

20 A. Yes.

21 Q. What was your preliminary opinion on the
22 19th as to cause of death?

23 A. Hyperthermia.

24 Q. You were asked whether on October 19th or
25 prior to that Detective Diskin had ever come to you

1 with any concerns or doubts about toxins,
2 organophosphates, out at Angel Valley.

3 Did the detective ever come to you with
4 those concerns?

5 A. Not that I recall.

6 Q. Have you -- in your review of the records
7 and the information, have you seen anything to
8 indicate that there were organophosphates out at
9 the scene?

10 A. No.

11 Q. I think you used the word in reference to
12 an interview in April with Ms. Do and myself -- you
13 referenced the "organophosphate hypothesis." Can
14 you tell us what you mean by a "hypothesis."

15 A. Well, it's an idea that people test to
16 see if it fits the circumstances. It's -- well, in
17 this case it's just the consideration that
18 organophosphate toxicity is an active entity in
19 this case. And the hypothesis part is the
20 consideration that organophosphates are what -- or
21 physiologically playing in this case.

22 So to test that idea, I compared the
23 known signs and symptoms of organophosphate
24 toxicity with the observed diseases and
25 physiological changes.

1 Q. I think just before the break, you had
2 mentioned that you had heard from participants
3 that -- or from their reports that there may be
4 areas in the sweat lodge that had fresher air or
5 less fresh air?

6 A. Yes.

7 Q. Can that explain -- or does it explain
8 why some people presented to the different
9 hospitals with miosis and some people didn't
10 present with miosis?

11 A. I think it would account for that.

12 Q. Can you explain that.

13 A. Well, if someone has -- is in an area of
14 the tent that has a higher level of carbon dioxide,
15 I would expect them to have miosis; whereas, a
16 person who is getting fresh air wouldn't have it.

17 Q. You were asked some questions about the
18 detective's request that you test Ms. Neuman's
19 blood after the trial started.

20 Do you remember being asked about that?

21 A. I do.

22 Q. And referring to Exhibit 998, is that the
23 report that Ms. Do was asking you about?

24 A. Yes.

25 Q. And can you tell us whether or not a

1 negative finding in that report would have been
2 significant.

3 **A. A negative finding does not exclude the**
4 **possibility that there are or were organophosphates**
5 **in that specimen.**

6 **Q.** Because of the passage of time?

7 **A. Passage of time, how the specimen was**
8 **stored.**

9 **Q.** If there had been a positive finding,
10 would that have been significant?

11 **A. Yes.**

12 **Q.** And what could a positive finding have
13 told you?

14 **A. That organophosphates were implicated as**
15 **a toxic substance in this case.**

16 **Q.** And Ms. Do asked you about the
17 detective's reason for having you run the test. Do
18 you realize detectives have to go after information
19 that -- whatever it lies, good or bad?

20 **A. Yes. I understand that.**

21 **Q.** Can that explain, then, why the detective
22 wanted you to do that test even though a negative
23 finding wouldn't be significant?

24 **MS. DO:** Objection. Calls for speculation.

25 **THE COURT:** Sustained.

1 **Q.** BY MR. HUGHES: You were asked if the
2 evidence showed that Ms. Shore or Mr. Brown were
3 not dehydrated.

4 Do you remember being asked that?

5 **A. Yes.**

6 **Q.** Do you know whether or not they were
7 dehydrated?

8 **A. I believe they were not technically**
9 **dehydrated.**

10 **Q.** And do you know how that was determined?

11 **A. Well, analysis of their blood samples for**
12 **chemicals in their blood that would indicate that a**
13 **person is dehydrated, a higher concentration of**
14 **sodium creatinine than normal.**

15 **Q.** And is that something that you believe
16 would have been in Dr. Lyon's autopsy report?

17 **A. If they were dehydrated?**

18 **Q.** Yes.

19 **A. Yes.**

20 **Q.** Now, do you know whether -- and I can
21 give you a hypothetical. This is going to be a
22 little bit long. Here's the hypothetical:
23 Assuming that Mr. Shore was found unconscious with
24 his heart stopped inside the sweat lodge and CPR
25 was performed on him for maybe 40 minutes or so,

1 and then at that point EMS arrives and they put
2 I.V.s on him similar to Ms. Neuman, similar I.V.s
3 with wide open flow, even though -- and assume
4 there is no shockable rhythm at any of this time
5 but effective CPR is being performed. Can that CPR
6 coupled with the I.V. infuse liquids through
7 Mr. Shore's body?

8 **A. I believe it can. You can pump blood**
9 **through a person's body by doing chest**
10 **compressions, continued CPR with the infusion.**

11 **Q.** And if that continued on until they
12 arrive at the hospital where they're pronounced
13 dead, can that infusion of fluids via the CPR or an
14 auto -- do you know what AutoPulse CPR is?

15 **A. I'm not sure.**

16 **Q.** A machine that automatically does CPR in
17 the ambulance.

18 **A. I've never seen that.**

19 **Q.** I used to be an EMT and never saw it
20 either. It's a new machine that -- well, let's
21 assume for sake of argument that there is a machine
22 that can do effective CPR once you get loaded up
23 into some ambulances.

24 Can that infusion of liquid affect the
25 level that you would look for in ocular fluid at

1 the time the CPR is terminated, the I.V.s are taken
2 off at the hospital and the person is declared
3 dead -- can that effect the enzymes or the
4 electrolytes in the eye that are used to determine
5 whether somebody was dehydrated?

6 **A. I think it can affect the level of, well,**
7 **the concentration of electrolytes in the body**
8 **fluids. 40 --**

9 **Q.** Would you -- go ahead. I'm sorry.

10 **A. 40 minutes of CPR seems like a lot of**
11 **time to artificially pump blood for somebody.**

12 **Q.** If you had a patient, then, who arrives
13 for you to do an examination on, a manner and cause
14 of death determination, what significance would you
15 give -- if you were trying to determine if they
16 were dehydrated, what significance would you give,
17 assuming the person had been infused and circulated
18 in the manner that we were hypothetically speaking?

19 **A. I think the infusion would make the**
20 **dehydration seem less apparent. It would -- well,**
21 **hydration would make them less dehydrated. I'm**
22 **sorry. That's -- I'm not sure I answered that**
23 **question.**

24 **Q.** Would the -- if you saw that patient in
25 your morgue, would you have any confidence in the

1 enzyme levels or the electrolyte levels from the
2 ocular fluid in making a determination as to were
3 they dehydrated or not at the time of death?

4 **A. Well, it would make me think that their**
5 **electrolytes -- the electrolytes in their vitreous**
6 **may not accurately reflect what they would have**
7 **been had they not been resuscitated or attempted --**
8 **transfused and with CPR in effect.**

9 **Q.** Have you had an opportunity to look at
10 the autopsy report for Mr. Shore or Ms. Brown?

11 **A. I have not.**

12 **Q.** I'm going to show you what's been
13 admitted as exhibits 375 and 376, which are
14 Mr. Shore's autopsy report and then some notes and
15 that sort of thing that Dr. Lyon prepared.

16 Can you tell us whether there was any
17 testing that could give -- assuming you didn't know
18 about the I.V. and that sort of thing -- that could
19 give someone a determination as to dehydration?

20 **A. Looking at this pattern, I don't think**
21 **anyone would diagnose dehydration based on these**
22 **numbers.**

23 **Q.** Is there any way to tell one way or the
24 other, assuming a person had been infused and
25 circulated for 45 minutes to an hour beforehand?

1 **A. I don't know.**

2 **Q.** Would you -- if you had those figures and
3 it was your patient -- and I'm not saying Dr. Lyon
4 made an opinion one way or the other. But based on
5 your review, is that a determination you would have
6 confidence in as to whether or not the person was
7 dehydrated?

8 **A. No.**

9 **Q.** I'm going to show you what's been
10 admitted as Exhibit 371 and 370, which are
11 Ms. Brown's -- the same sort of records. And I'm
12 going to ask the same question.

13 Again, not implying that Dr. Lyon reached
14 an opinion. But if you had those results, and
15 assuming hypothetically the person had been infused
16 and circulated for that period of time, would you
17 have any confidence as to whether or not at the
18 time you got those readings the person was actually
19 dehydrated or not dehydrated at the time of
20 death -- the time that the EMS people started their
21 work?

22 **A. No. I wouldn't be confident in**
23 **interpreting these results as reflecting what the**
24 **electrolyte status was at the time that CPR and**
25 **infusions began.**

1 **Q.** Ms. Do asked you some questions about if
2 you were told by the detective about different rat
3 poisons that were used on the property. Did you
4 see any sign in Ms. Neuman's medical records that
5 she had been poisoned by rat poison?

6 **A. No. I mean -- so she did have some**
7 **bleeding. But I didn't attribute that to -- rat**
8 **poison wasn't the first thing I thought of when I**
9 **saw that.**

10 **Q.** The bleeding you're referring to -- is
11 that the DIC you discussed?

12 **A. I think it it's more likely than not due**
13 **to DIC.**

14 **Q.** The DIC that you observed in
15 Ms. Neuman -- was that consistent with a late-stage
16 patient suffering from hyperthermia or heat stroke?

17 **A. Yes.**

18 **Q.** Doctor, do you have the report from the
19 criminalist, Ms. Sy, up here?

20 **A. Is this it?**

21 **Q.** Thank you. That's Exhibit 345. And from
22 that you were asked some questions about that
23 report. Do you know to what temperature these
24 different items, that the results on the next page
25 were referring to, were heated to and for how long?

1 **A. I'm not --**

2 **Q.** Let me ask you this: Can you convert
3 into -- or approximately convert into Fahrenheit
4 what 50 degree Celsius would be?

5 **A. Not at the moment.**

6 **Q.** If that puts you on the spot, I won't ask
7 you to --

8 **A. I can't tell you exactly.**

9 **Q.** In Celsius what's the boiling point of
10 water?

11 **A. Water boils at -- I'm sorry. It depends**
12 **on other things like atmospheric conditions.**

13 **Q.** At sea level do you know what the boiling
14 point in Celsius would be?

15 **A. 100 degrees Centigrade. That doesn't**
16 **sound right. I guess the short answer is I don't**
17 **know.**

18 **Q.** Do you know, then -- and on this report
19 it indicates that these items -- you can tell there
20 is kind of a legend up here. Tells you what the
21 items are by the number down there.

22 Do you know -- assuming those items that
23 are listed here were heated to 50 degrees Celsius
24 for eight hours inside of one of those little paint
25 cans, do you know the significance, if any, that

1 the results on this page would have?

2 **A. I have no confidence in my ability to**
3 **interpret any of the findings on this page. It's**
4 **data I'm not familiar with.**

5 **Q.** Is that something that you would defer to
6 the criminalist who prepared the report?

7 **A. Absolutely.**

8 **Q.** You were asked whether anyone from the
9 crime lab, Ms. Sy or Detective Diskin, ever
10 contacted you about the testing that was being done
11 by the crime lab.

12 Do you recall that?

13 **A. Yes.**

14 **Q.** Do you know whether the crime lab was in
15 touch with Dr. Fischione from Maricopa County as
16 far as testing to be done?

17 **A. I have no knowledge of that.**

18 **Q.** Did Dr. Fischione play some sort of role
19 as a coordinator or a facilitator for the
20 investigations into the three deaths at Angel
21 Valley?

22 **A. He did.**

23 **Q.** You were asked a question about whether
24 people, and to your understanding, were free to
25 leave or not. I believe you stated other than the

1 ones who were unconscious inside.

2 That was your understanding?

3 **A. Yes.**

4 **Q.** Is there a point in time for a person who
5 is suffering from hyperthermia or heat stroke prior
6 to the point they become unconscious, that they
7 begin to show some sort of altered level of
8 consciousness or altered mental function?

9 **A. Yes.**

10 **Q.** And can you explain how that works. Does
11 a person go directly from being out in the warm sun
12 to becoming unconscious?

13 **A. No. It's the hyperthermia -- I don't**
14 **know if I can explain how that works exactly. With**
15 **dehydration there is a drop in blood pressure. And**
16 **a person would feel faint or dizzy because of the**
17 **lack of perfusion to their brain. And if that's**
18 **allowed to progress, then it takes its toll, and a**
19 **person would go unconscious eventually.**

20 **Q.** I think you testified earlier that
21 dehydration is not a necessary component of someone
22 suffering from heat stroke or hyperthermia?

23 **A. Yes. Heat can be directly toxic to a**
24 **person without the intermediate step of**
25 **dehydration.**

1 **Q.** If a person then who is suffering from
2 heat stroke or hyperthermia but not dehydration --
3 can they reach a point where they become
4 unconscious?

5 **A. Absolutely.**

6 **Q.** And can they reach a point prior to
7 becoming unconscious where they are not able to
8 make informed decisions about themselves?

9 **A. Yes.**

10 **Q.** Doctor, you've been patient with me.
11 Thank you very much. I don't have any other
12 questions.

13 **MS. DO:** Your Honor, I'd request brief recross
14 given our earlier discussion.

15 **THE COURT:** Counsel, please approach.

16 (Sidebar conference.)

17 **THE COURT:** Ms. Do.

18 **MS. DO:** Thank you, Your Honor. I'd like very
19 brief recross, just a few questions, regarding
20 hypercapnia given his testimony, which was not
21 elicited under cross, regarding the air stagnation,
22 circulation.

23 **MR. HUGHES:** I don't have any objection.

24 **THE COURT:** Okay.

25 (End of sidebar conference.)

RECROSS-EXAMINATION

1 **BY MS. DO:**

2 **Q.** Dr. Mosley, I only have a few questions
3 for you.

4 You testified that in hypercapnia you
5 would expect to see a headache but not in
6 organophosphates; correct?

7 **A. Yes. It's not part of the syndromes, the**
8 **mnemonics for remembering the symptoms. I mean, it**
9 **might happen, but it's not a hallmark as it is with**
10 **hypercapnia.**

11 **Q.** Okay. I'm going to return to that. But
12 let me ask you quickly, you had indicated that you
13 believe there was an elevation or buildup of carbon
14 dioxide due to stagnant air; correct?

15 **A. Yes.**

16 **Q.** Due to air circulation issues; correct?

17 **A. Yes.**

18 **Q.** And quite possibly areas being deprived
19 of fresh air; correct?

20 **A. Correct.**

21 **Q.** Now, you've not ever actually inspected
22 the sweat lodge itself; correct?

23 **A. That's correct.**

24 **Q.** These are beliefs or opinions that you

1 are giving to the jury based upon the witness
2 statements, which are hearsay; correct?

3 **A. Correct.**

4 **Q.** And I assume also from the photographs of
5 the sweat lodge that you've seen?

6 **A. More the witness statements. I have no
7 clear recollection of the photographs of the sweat
8 lodge.**

9 **Q.** And you would agree with me that each of
10 these factors that you talked to the jury about --
11 the stagnant air, the air circulation and the fresh
12 air in certain parts -- would be -- would you not
13 agree with me would be in part due to the design of
14 the sweat lodge structure itself?

15 **A. Yes.**

16 **Q.** Okay. If the sweat lodge structure was
17 built so that it was airtight or sealed airtight,
18 that would be an issue; correct?

19 **A. Yes.**

20 **Q.** As it goes to your opinion of
21 hypercapnia?

22 **A. Yes.**

23 **Q.** If the sweat lodge was built so that, for
24 example, the pit containing the rocks that emitted
25 the heat was off-center creating areas with more

1 problems, that would be due to the design of the
2 sweat lodge structure; correct?

3 **A. Yes.**

4 **Q.** So when you talk about hypercapnia and
5 all these issues that relate to the design of the
6 sweat lodge structure, you are aware, are you not,
7 Doctor, that Mr. Ray did not design and did not
8 build the sweat lodge?

9 **A. I have no idea about who built the sweat
10 lodge.**

11 **Q.** All right. My last question to you,
12 Doctor, is, as a medical examiner, you would
13 oftentimes consult with literature; correct?

14 **A. Yes.**

15 **Q.** And as you've indicated to the jury,
16 you're not an emergency medicine doctor; correct?

17 **A. That's correct.**

18 **Q.** I'm going to ask you to take a look at
19 this "Goldfrank Toxicologic Emergency."

20 **A. Yes.**

21 **Q.** Is this something that you might consult
22 as a medical examiner looking at disorders such as
23 organophosphate toxicity?

24 **A. Yes.**

25 **Q.** I'm going to direct your attention to

1 this paragraph under "Acute Toxicity,
2 Organophosphate Compounds." Do you see there the
3 sentence, many patients present awake and alert,
4 complaining of anxiety, restlessness, insomnia and
5 headache?

6 **A. Yes. I see that.**

7 **Q.** Do you stand corrected now that headache
8 is a feature, a sign and a symptom, that you would
9 see in organophosphate toxicity?

10 **A. I do.**

11 **Q.** Thank you.

12 MS. DO: I have nothing further, Your Honor.

13 THE COURT: Thank you, Ms. Do.

14 Members of the jury, do any of you have
15 questions?

16 There appear to be some questions.

17 Will the attorneys please approach and
18 review the questions.

19 (Sidebar conference.)

20 MS. DO: Defense has no objection.

21 MR. HUGHES: I have no objection either.

22 THE COURT: I'll ask all three questions.

23 MR. HUGHES: For purposes of the record,

24 Ms. Do has shown the doctor a document not
25 identified. I ask that it be marked and preserved

1 for purposes of identification but not admitted.

2 THE COURT: That makes sense, have a complete
3 record.

4 MS. DO: I think it's 1008.

5 THE COURT: 1008 is going to be made part of
6 the record, not a trial exhibit.

7 (End of sidebar conference.)

8 THE COURT: Dr. Mosley, I will ask the
9 questions. The lawyers may want to follow up.

10 First question: In a superhumid, closed
11 environment with a high level of CO2 and heat, can
12 the body sweat properly?

13 THE WITNESS: If the body can sweat
14 insufficiently, I would expect the body not to be
15 able to sweat well enough. That's the whole basis
16 of hyperthermia and heat stroke is the mechanisms
17 we have to deal with it are insufficient to reverse
18 the challenge to our physiology.

19 So the question was, can the body sweat?

20 THE COURT: I'll go ahead and read it again.
21 I think there's some other parts to it, so I'll
22 read it over, in any event.

23 In a superhumid, closed environment with
24 a high level of CO2 and heat, can the body sweat
25 properly? That's the first part.

1 THE WITNESS: The answer would be no.

2 THE COURT: And then it says -- the question
3 continues: And if it can't, would the body retain
4 water and give a false level of hydration?

5 THE WITNESS: I would not expect the body to
6 retain water in that situation.

7 THE COURT: Thank you.

8 Follow-up, Mr. Hughes?

9 MR. HUGHES: Thank you.

10 FURTHER REDIRECT EXAMINATION

11 BY MR. HUGHES:

12 Q. Doctor, in the situation described in the
13 question, would you expect a person to start
14 sweating profusely?

15 A. Yes.

16 Q. And why is that?

17 A. Because we're designed to sweat profusely
18 to cool ourselves and to counteract the challenge
19 to our physiology.

20 Q. Thank you.

21 THE COURT: Ms. Do.

22 MS. DO: Thank you.

23 FURTHER RECROSS-EXAMINATION

24 BY MS. DO:

25 Q. Doctor, just one or two questions.

1 You did say that you would not expect the
2 body to retain water and give a false level of
3 hydration; correct?

4 A. Yes.

5 Q. And so in that particular environment, as
6 the question stated, at a superhumid, closed
7 environment, would a high level of CO2 and heat
8 prevent the body from sweating properly, and your
9 answer to that is the body wouldn't sweat well
10 enough; correct?

11 A. Correct.

12 Q. The brain would still send out signals to
13 the body to try to continue to sweat; correct?

14 A. Yes.

15 Q. Because that is one of the primary
16 mechanism to cooling down the body; correct?

17 A. Correct.

18 Q. But it's sort of futile because as you're
19 sweating but you're not cooling yourself down and
20 your body continues, that should increase the level
21 of dehydration; correct?

22 A. Yes.

23 Q. Thank you.

24 MR. HUGHES: No other follow-up.

25 THE COURT: The second question is, if there

1 was salivation when the person came out of the
2 sweat lodge, could it have stopped or been cleaned
3 away before the EMS arrived 20 to 25 minutes later?

4 THE WITNESS: Yes.

5 THE COURT: Follow-up?

6 MR. HUGHES: Thank you.

7 FURTHER REDIRECT EXAMINATION

8 BY MR. HUGHES:

9 Q. Doctor, with respect to a person who has
10 suffered from heat stroke to the point that they
11 have become unconscious, if you see the salivation
12 that you testified to earlier, would you expect
13 that salivation to terminate within a few minutes
14 or would you expect it to continue through or until
15 they received treatment?

16 A. I would expect it to continue until they
17 seek treatment.

18 Q. In other words, if I'm a bystander on the
19 scene, and I wipe away this excess salivation and
20 the EMT's arrive 10 minutes later and take half an
21 hour to transport someone, would you expect that
22 salivation or the frothy sputum to continue to
23 become evident while they're in the ambulance being
24 transported?

25 A. Yes.

1 Q. Thank you.

2 THE COURT: Ms. Do.

3 MS. DO: Thank you.

4 FURTHER RECROSS-EXAMINATION

5 BY MS. DO:

6 Q. Dr. Mosley, you would agree with me that
7 the onset or the severity of any particular sign or
8 symptom would depend on the compound; correct?

9 A. Yes.

10 Q. Would depend on the route of exposure,
11 i.e., either inhalation, absorption through the
12 skin or ingestion; correct?

13 A. Correct.

14 Q. It would also depend on the degree of
15 exposure or the length of exposure; correct?

16 A. Yes.

17 Q. There is a lot of variabilities there
18 that you wouldn't know unless you know each of
19 those three factors; correct?

20 A. That's correct.

21 Q. Now, you had told the jury, in a question
22 to Mr. Hughes's direct examination, that you could
23 expect to see in organophosphate toxicity just the
24 amount of what he's described as latte on a
25 cappuccino; correct?

1 **A. Yes.**

2 **Q.** Or it might have been a mocha. I'm not
3 sure.

4 If a person is intubated and then given a
5 breathing mask, would you expect those two medical
6 interventions to also perhaps disturb a person's
7 foaming or frothy sputum if it was observed prior
8 to medical intervention?

9 **A. Yes.**

10 **Q.** Thank you.

11 I have nothing further, Your Honor.

12 THE COURT: Mr. Hughes.

13 MR. HUGHES: Thank you.

14 FURTHER REDIRECT EXAMINATION

15 BY MR. HUGHES:

16 **Q.** Doctor, how would the placing of, say, an
17 oxygen mask on a patient affect this excess
18 salivation?

19 **A. It would displace it. I suppose that**
20 **they would need to suction. But if you have air**
21 **flowing in, they might aspirate the salivation.**
22 **Just thinking about where else could it go. I**
23 **think that a breathing mask could -- I'm not sure**
24 **where that frothy sputum could go except back into**
25 **the lungs.**

1 **Is there any -- sorry. I was going to**
2 **ask a question, but that's not my job.**

3 **Q.** Let me ask you this: Do you know whether
4 ambulances carry suction equipment on board just
5 for that purpose?

6 **A. They do.**

7 **Q.** And is that something -- if it was used
8 and there was this excess salivation in need of
9 being suctioned, is that something you would expect
10 to see documented in the EMS report?

11 **A. That's a huge problem for emergency**
12 **medical workers. People aspirate what's in their**
13 **stomach. If they drink a lot of water, for**
14 **example, and they go unconscious -- because the**
15 **person can't protect their own airway, the EMS**
16 **responders are aware to protect it for them by**
17 **aspirating any fluids. They might have vomited.**
18 **Or if there is excessive fluid, they would need to**
19 **attend to that so that they don't aspirate it.**

20 **Q.** And, Doctor, you had a question for me.
21 Is that pertaining to the question that you were
22 asked?

23 **A. I'm not sure.**

24 **Q.** Well, you started to ask a question.
25 What was your question?

1 **A. Oh, oh, oh. I think it was one that you**
2 **asked, which was, is there any evidence that they**
3 **aspirated fluid from these people? And I don't**
4 **recall ever reading anything like that.**

5 **Q.** We can go through the medical records.

6 Did you see anything in Liz Neuman's
7 medical records that would lead you to believe
8 that -- in her medical records or her ambulance
9 records that would lead you to believe that there
10 was fluid that was being suctioned by the Guardian
11 Air?

12 **A. No.**

13 **Q.** That was the record I had you look at up
14 on the stand?

15 **A. Yes.**

16 **Q.** How about by the Verde Valley Fire
17 Department, the record that showed the blood
18 pressure and the miosis?

19 **A. There is no indication that managing**
20 **fluid that was a potential hazard for her was a**
21 **problem. There is no suctioning it away from her**
22 **airway.**

23 **Q.** And with respect to the other patients
24 who were transported and who later died, have you
25 had an opportunity to look at their EMS records?

1 **A. No.**

2 MR. HUGHES: Your Honor, may I -- I don't
3 know. Let me find those records.

4 **Q.** And I'll ask you if you see anything in
5 them, the EMS records, that would lead you to
6 believe -- I believe Ms. Brown's EMS records are
7 Exhibit 374.

8 Doctor, would you look in the stack in
9 front of you for the EMS records for Ms. Brown and
10 Mr. Shore.

11 **A. Okay. I have -- it's Ms. Spencer's**
12 **hospital records.**

13 **Q.** Doctor, I won't belabor the point. I
14 know we're getting close to 5:00. Let me ask you
15 this: In the records, I believe, are in evidence,
16 if -- is that a factor that you would expect to see
17 documented in the records if -- in their EMS
18 records if, indeed, that had been observed?

19 **A. Yes.**

20 MR. HUGHES: I have no other questions on
21 that, Your Honor.

22 MS. DO: Your Honor, may I ask the doctor one
23 question?

24 THE COURT: Yes. Right. In light of the
25 length of that, yes, you may.

1 MS. DO: Thank you.

2 FURTHER RECROSS-EXAMINATION

3 BY MS. DO:

4 Q. Dr. Mosley, I'm going to show you
5 Exhibit 222. It's Sidney Spencer's medical
6 records. If you will look at the second page,
7 which is Bates stamp 2084.

8 And, again, Ms. Spencer was one of the
9 four critically ill admitted to Flagstaff Medical
10 Center; correct?

11 A. Correct.

12 Q. And assuming that the jury has heard from
13 witnesses that Ms. Spencer was foaming or had
14 frothy sputum at the scene?

15 A. Yes.

16 Q. Okay. Now, in her medical records it is
17 also here documented, she is noted to have saliva
18 around the tube and was suctioned on arrival;
19 correct?

20 A. Correct.

21 Q. And that would indicate to you that she
22 continued to have the excess salivation that would
23 be indicative of an organophosphate toxicity;
24 correct?

25 A. Correct.

1 MS. DO: Thank you, Your Honor.

2 THE COURT: Dr. Mosley, this last question has
3 two parts. I'm going to read all the way through
4 it and then go back.

5 THE WITNESS: Okay.

6 THE COURT: Did you autopsy Ms. Neuman's
7 brain? If so, did her brain show injury? And, if
8 so, can you explain cause and effect of this
9 injury? So it's in three parts.

10 The first part, did you autopsy
11 Ms. Neuman's brain?

12 THE WITNESS: I did.

13 THE COURT: If so, did her brain show injury?

14 THE WITNESS: Not grossly identifiable injury
15 that I commented on.

16 THE COURT: I'll go ahead and complete the
17 last question. And you probably answered it.

18 And, if so, can you explain cause and
19 effect of this injury?

20 THE WITNESS: Clinically speaking, she had
21 evidence of anoxic brain injury, a lack of oxygen
22 to the brain, which may not be readily apparent to
23 gross examination of the brain. It's really -- the
24 type of injury she had could be the result of
25 multiple, different etiologies. Anoxic brain

1 injury can be the point of multiple etiologies.

2 FURTHER REDIRECT EXAMINATION

3 BY MR. HUGHES:

4 Q. Doctor, can you tell us what an anoxic
5 brain injury is.

6 A. Lack of blood flow and oxygen to the
7 brain to the extent that there is irreversible
8 brain damage.

9 Q. Do you know whether an anoxic brain
10 injury was observed in Ms. Neuman at the Flagstaff
11 Medical Center?

12 A. It was.

13 Q. And, in fact, do you know whether she was
14 comatose the entire time she was at the Flagstaff
15 Medical Center?

16 A. I believe she was.

17 Q. Can you tell us what the -- some of the
18 signs and symptoms you'd expect to see for someone
19 suffering from an anoxic brain injury.

20 A. Well, coma is a good start. Signs and
21 symptoms of anoxic brain injury.

22 Q. Let me ask you this: Are any of the --
23 do you remember the SLUDGEM mnemonic that was up on
24 the list a moment ago?

25 A. Yes.

1 Q. Are any of those signs and symptoms
2 things that you might expect with an anoxic brain
3 injury?

4 A. They might be associated, but I wouldn't
5 expect --

6 Q. Would any of those be nonspecific to an
7 anoxic brain injury?

8 A. Yes.

9 Q. For example, the defecation that was on
10 that list. If a person was obtunded or in a
11 comatose state, would you expect them to lose
12 control of their bowels?

13 A. Yes. Obtunded people lose control of
14 their bowels.

15 Q. How about the miosis? If a person
16 suffered from an anoxic brain injury, would it be
17 surprising to see that they were exhibiting miosis?

18 A. No.

19 Q. Thank you.

20 THE COURT: Ms. Do.

21 FURTHER RECROSS-EXAMINATION

22 BY MS. DO:

23 Q. Dr. Mosley, when you say "anoxic brain
24 injury," you mean not enough oxygen to the brain;
25 correct?

1 A. Yes.

2 Q. You don't mean to tell the jury that she
3 suffocated; correct?

4 A. Correct.

5 Q. And you said that there are multiple
6 etiologies, meaning there are multiple reasons that
7 could explain why she had an anoxic brain injury;
8 correct?

9 A. Yes.

10 Q. Including respiratory failure?

11 A. Yes.

12 Q. And respiratory failure, again, is not
13 specific. It could be caused by organophosphate
14 toxicity or some other toxin; correct?

15 A. Correct.

16 MS. DO: Thank you, Your Honor.

17 THE COURT: Thank you.

18 Mr. Hughes, anything else?

19 MR. HUGHES: No, Your Honor. Thank you.

20 THE COURT: Then, Dr. Mosley, you're going to
21 be excused temporarily as a witness. Perhaps you
22 won't be called back, but you're subject to
23 possible recall. You will need to continue to
24 follow the rule of exclusion in that aspect of it
25 in terms of not discussing your case or your

1 testimony with any other witness until it's over.

2 And you might want to talk to the
3 attorneys before you leave to make sure there is no
4 misunderstanding about the scope of the rule of
5 exclusion since you would be subject to recall.

6 And we are going to take the weekend
7 recess at this time, ladies and gentlemen. Again,
8 thank you for all of your effort and attention in
9 this case. Very much appreciated by all of us.

10 But remember the admonition. And we will
11 resume next Tuesday, usual time. Be assembled,
12 please, at 9:15.

13 And we will be in recess. Thank you.

14 (The proceedings concluded.)

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1 STATE OF ARIZONA)
2 COUNTY OF YAVAPAI) ss REPORTER'S CERTIFICATE

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4 I, Mina G. Hunt, do hereby certify that I
5 am a Certified Reporter within the State of Arizona
6 and Certified Shorthand Reporter in California.

7 I further certify that these proceedings
8 were taken in shorthand by me at the time and place
9 herein set forth, and were thereafter reduced to
10 typewritten form, and that the foregoing
11 constitutes a true and correct transcript.

12 I further certify that I am not related
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16 In witness whereof, I have affixed my
17 signature this 19th day of May, 2011.

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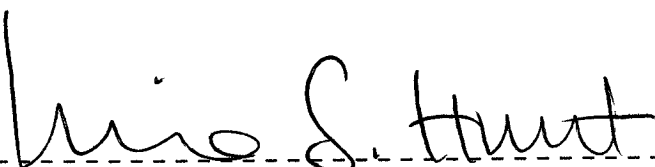
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17 In witness whereof, I have affixed my
18 signature this 19th day of May, 2011.
19
20

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23 -----
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25 CA CSR No. 8335